

SEQUENCE LISTING



TECH CENTER 1600/2900

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RECEIVED

<110> Eisenberg, David
Rotstein, Sergio H.
Marcotte, Edward M.

<120> DETERMINING THE FUNCTIONS AND
INTERACTIONS OF PROTEINS BY COMPARATIVE ANALYSIS

<130> 07419-032001

<140> 09/712,363

<141> 2000-11-13

<150> PCT/US00/02246

<151> 2000-01-28

<150> 60/179,531

<151> 2000-02-01

<150> 60/117,844

<151> 1999-01-29

<150> 60/118,206,

<151> 1999-02-01

<150> 60/126,593

<151> 1999-03-26

<150> 60/134,093

<151> 1999-05-14

<150> 60/134,092

<151> 1999-05-14

<150> 60/165,124

<151> 1999-11-12

<150> 60/165,086

<151> 1999-11-12

<160> 292

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<213> Mycobacterium tuberculosis

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<212> DNA

<213> Mycobacterium tuberculosis

<400> 8

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<211> 468

<212> DNA

<213> Mycobacterium tuberculosis

<400> 9

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468

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<211> 1584

<212> DNA

<213> Mycobacterium tuberculosis

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<211> 2316

<212> DNA

<213> Mycobacterium tuberculosis

<400> 11

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<211> 2037

<212> DNA

<213> Mycobacterium tuberculosis

<400> 12

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<211> 1683

<212> DNA

<213> Mycobacterium tuberculosis

<400> 13

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<211> 1197

<212> DNA

<213> Mycobacterium tuberculosis

<400> 14

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<211> 1068

<212> DNA

<213> Mycobacterium tuberculosis

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<210> 16

<211> 1878

<212> DNA

<213> Mycobacterium tuberculosis

<400> 16

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<211> 708

<212> DNA

<213> Mycobacterium tuberculosis

<400> 17

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<211> 1188

<212> DNA

<213> Mycobacterium tuberculosis

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<211> 1035

<212> DNA

<213> Mycobacterium tuberculosis

<400> 19

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<211> 4209

<212> DNA

<213> Mycobacterium tuberculosis

<400> 20

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<210> 22
 <211> 861
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 22
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<210> 23

<211> 1623

<212> DNA

<213> Mycobacterium tuberculosis

<400> 23

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<210> 24

<211> 1110

<212> DNA

<213> Mycobacterium tuberculosis

<400> 24

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<210> 25

<211> 1356

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 25

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<210> 26

<211> 750

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 26

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<210> 27

<211> 1233

<212> DNA

<213> Mycobacterium tuberculosis

<400> 27

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<210> 28

<211> 888

<212> DNA

<213> Mycobacterium tuberculosis

<400> 28

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<210> 29

<211> 1590

<212> DNA

<213> Mycobacterium tuberculosis

<400> 29

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<210> 30

<211> 3519

<212> DNA

<213> Mycobacterium tuberculosis

<400> 30

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<213> Mycobacterium tuberculosis

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<213> Mycobacterium tuberculosis

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<213> *Mycobacterium tuberculosis*

<400> 35

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tcgaacgcca	tcgccgccga	agtgcacgcg	ttacggaaga	taccggcccc	ggaacgcctc	1440
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<210> 36

<211> 1395

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 36

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cagcagcaaa	cgtacagcca	gcagttcgac	tggcgttacc	caccgtcccc	gccccgcag	180
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aaggcggagc	agtga					1395

<210> 37

<211> 795

<212> DNA

<213> Mycobacterium tuberculosis

<400> 37

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ccgggtcgcc	tggacgggtg	tgcggagccg	cacgtccagc	gggaggcctt	tgcctggcat	360
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gcgaacgaac	cgtactgcct	gccctatacc	gtgcggggcg	tggctgaact	ggtcaatcgg	720
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<210> 38

<211> 1089

<212> DNA

<213> Mycobacterium tuberculosis

<400> 38

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tctcgcgcca	gcccgcgtcc	gctgtccggg	atggcgctac	cggtcgtcag	cgccaagacg	420
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acggccccga	tcgtcgaagg	catgcagatc	caggtgaccc	gcaatcggat	caagaaggct	600
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gcgcgctga						1089

<210> 39

<211> 954

<212> DNA

<213> Mycobacterium tuberculosis

<400> 39

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gacgccaaca	cgggtgcgacg	ggtggttgcc	gcctccgggg	tcagccgttc	cgacctggtt	180
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<210> 40

<211> 921

<212> DNA

<213> Mycobacterium tuberculosis

<400> 40

gtgcccaccg	ggtcggtcac	cgttcgggtg	cccggaaagg	tcaacctcta	tctggcggtc	60
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gtcgacgagg	taaccgttcg	taacgctgat	gtgctctcgc	tcgagttggt	cggcgagggg	180
gccgaccagc	tgccgaccga	cgaacgcaat	ctcgcctggc	aggcggccga	gctgatggcc	240
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<210> 41

<211> 1113

<212> DNA

<213> Mycobacterium tuberculosis

<400> 41

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<210> 42

<211> 1008

<212> DNA

<213> Mycobacterium tuberculosis

<400> 42

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<210> 43

<211> 675

<212> DNA

<213> Mycobacterium tuberculosis

<400> 43

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<210> 44

<211> 1650

<212> DNA

<213> Mycobacterium tuberculosis

<400> 44

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<210> 45

<211> 396

<212> DNA

<213> Mycobacterium tuberculosis

<400> 45

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<210> 46

<211> 1173

<212> DNA

<213> Mycobacterium tuberculosis

<400> 46

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caacccgatt	ccttgacccg	ggtgtatgcc	gtggcttccg	gtaagggcgg	agtcggaaag	420
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ggcaaggaac	tgcatagcat	cgccgacggc	ttgtcgactc	gacgacgcgg	attggcgggc	1140
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<210> 47

<211> 1101

<212> DNA

<213> Mycobacterium tuberculosis

<400> 47

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<210> 48

<211> 1587

<212> DNA

<213> Mycobacterium tuberculosis

<400> 48

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tcggtgatgc	ccagcacggg	tcgtgggcat	acgcattgcg	cgtcgggtgt	gatcggggag	1560
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<210> 49

<211> 1326

<212> DNA

<213> Mycobacterium tuberculosis

<400> 49

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atccgtccgc	tcaccagtc	gctggccggc	gacacgggtg	tgcgagtggc	cgggatcgtc	480
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<210> 50

<211> 1170

<212> DNA

<213> Mycobacterium tuberculosis

<400> 50

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cagttggcac	gccggggatc	gggctcggg	ggtgccgcat	tgtgcggggc	tggcgggcag	1140
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<210> 51

<211> 627

<212> DNA

<213> Mycobacterium tuberculosis

<400> 51

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ctgcgcgagc	ggatcccga	tctgcatttc	agtgtctcgg	ccacgacgcg	ggcgccacgc	180
ccggggcagg	tcgacgggtg	cgactaccac	ttcatcgacc	ccaccgcgtt	tcagcagctc	240
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actttggccc	agccgggtgcg	ggcggccggc	gcgactggtg	tgccggtgct	tatcgaggtt	360
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<210> 52

<211> 1374

<212> DNA

<213> Mycobacterium tuberculosis

<400> 52

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<210> 53

<211> 1020

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 53

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<210> 54

<211> 354

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 54

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<210> 55

<211> 810

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 55

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<210> 56

<211> 1419

<212> DNA

<213> Mycobacterium tuberculosis

<400> 56

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<210> 57

<211> 1446

<212> DNA

<213> Mycobacterium tuberculosis

<400> 57

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<210> 58

<211> 1224

<212> DNA

<213> Mycobacterium tuberculosis

<400> 58

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<210> 59

<211> 1185

<212> DNA

<213> Mycobacterium tuberculosis

<400> 59

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<210> 60

<211> 612

<212> DNA

<213> Mycobacterium tuberculosis

<400> 60

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<210> 61

<211> 1968

<212> DNA

<213> Mycobacterium tuberculosis

<400> 61

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<210> 62

<211> 1458

<212> DNA

<213> Mycobacterium tuberculosis

<400> 62

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<210> 63

<211> 1389

<212> DNA

<213> Mycobacterium tuberculosis

<400> 63

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<210> 64

<211> 1029

<212> DNA

<213> Mycobacterium tuberculosis

<400> 64

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<210> 65

<211> 666

<212> DNA

<213> Mycobacterium tuberculosis

<400> 65

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<210> 66

<211> 969

<212> DNA

<213> Mycobacterium tuberculosis

<400> 66

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<210> 67

<211> 2721

<212> DNA

<213> Mycobacterium tuberculosis

<400> 67

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<210> 68

<211> 3042

<212> DNA

<213> Mycobacterium tuberculosis

<400> 68

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<210> 69

<211> 876

<212> DNA

<213> Mycobacterium tuberculosis

<400> 69

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<210> 70

<211> 843

<212> DNA

<213> Mycobacterium tuberculosis

<400> 70

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<210> 71

<211> 357

<212> DNA

<213> Mycobacterium tuberculosis

<400> 71

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<210> 72

<211> 291

<212> DNA

<213> Mycobacterium tuberculosis

<400> 72

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<210> 73

<211> 726

<212> DNA

<213> Mycobacterium tuberculosis

<400> 73

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<210> 74

<211> 777

<212> DNA

<213> Mycobacterium tuberculosis

<400> 74

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<210> 75

<211> 1140

<212> DNA

<213> Mycobacterium tuberculosis

<400> 75

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<210> 76

<211> 1485

<212> DNA

<213> Mycobacterium tuberculosis

<400> 76

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<210> 77

<211> 1233

<212> DNA

<213> Mycobacterium tuberculosis

<400> 77

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<210> 78

<211> 1575

<212> DNA

<213> Mycobacterium tuberculosis

<400> 78

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<210> 79

<211> 1461

<212> DNA

<213> Mycobacterium tuberculosis

<400> 79

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<210> 80

<211> 1080

<212> DNA

<213> Mycobacterium tuberculosis

<400> 80

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<210> 81

<211> 1533

<212> DNA

<213> Mycobacterium tuberculosis

<400> 81

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<210> 82

<211> 1608

<212> DNA

<213> Mycobacterium tuberculosis

<400> 82

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<210> 83

<211> 1035

<212> DNA

<213> Mycobacterium tuberculosis

<400> 83

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<210> 84

<211> 2040

<212> DNA

<213> Mycobacterium tuberculosis

<400> 84

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<210> 85

<211> 1191

<212> DNA

<213> Mycobacterium tuberculosis

<400> 85

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<210> 86

<211> 432

<212> DNA

<213> Mycobacterium tuberculosis

<400> 86

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cagaactacc	aacaaatcca	tgaagagaac	ttctccgcgg	ccagcgatga	agcactcggg	420
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<210> 87

<211> 645

<212> DNA

<213> Mycobacterium tuberculosis

<400> 87

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<210> 88

<211> 900

<212> DNA

<213> Mycobacterium tuberculosis

<400> 88

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aaactgcccc	gtgaccagac	gggcgagacc	gacgcatatt	ctcgggcata	ctctgccccg	180
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gtggtcggtg	tcgccgccat	aattgccgcc	gttgcgctcg	tggtttcggt	gtcgttgctc	360
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<210> 89

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<400> 89

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<210> 90

<211> 1092

<212> DNA

<213> Mycobacterium tuberculosis

<400> 90

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<210> 91
 <211> 1248
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 91
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<210> 92
 <211> 2217
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 92
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<210> 93

<211> 1131

<212> DNA

<213> Mycobacterium tuberculosis

<400> 93

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<210> 94

<211> 1440

<212> DNA

<213> Mycobacterium tuberculosis

<400> 94

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<210> 95

<211> 261

<212> DNA

<213> Mycobacterium tuberculosis

<400> 95

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<210> 96

<211> 315

<212> DNA

<213> Mycobacterium tuberculosis

<400> 96

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<210> 97

<211> 2631

<212> DNA

<213> Mycobacterium tuberculosis

<400> 97

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<210> 98

<211> 2370

<212> DNA

<213> Mycobacterium tuberculosis

<400> 98

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<210> 99

<211> 807

<212> DNA

<213> Mycobacterium tuberculosis

<400> 99

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<210> 100

<211> 9210

<212> DNA

<213> Mycobacterium tuberculosis

<400> 100

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<211> 2715

<212> DNA

<213> Mycobacterium tuberculosis

<400> 101

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<211> 1272

<212> DNA

<213> Mycobacterium tuberculosis

<400> 102

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<211> 2079

<212> DNA

<213> Mycobacterium tuberculosis

<400> 103

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<210> 104

<211> 465

<212> DNA

<213> Mycobacterium tuberculosis

<400> 104

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<210> 105

<211> 1317

<212> DNA

<213> Mycobacterium tuberculosis

<400> 105

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<210> 106

<211> 2259

<212> DNA

<213> Mycobacterium tuberculosis

<400> 106

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<210> 107

<211> 897

<212> DNA

<213> Mycobacterium tuberculosis

<400> 107

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<210> 108

<211> 1689

<212> DNA

<213> Mycobacterium tuberculosis

<400> 108

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<210> 109

<211> 1812

<212> DNA

<213> Mycobacterium tuberculosis

<400> 109

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<210> 110

<211> 1164

<212> DNA

<213> Mycobacterium tuberculosis

<400> 110

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<210> 111

<211> 1215

<212> DNA

<213> Mycobacterium tuberculosis

<400> 111

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<210> 112

<211> 1311

<212> DNA

<213> Mycobacterium tuberculosis

<400> 112

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<210> 113

<211> 3870

<212> DNA

<213> Mycobacterium tuberculosis

<400> 113

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<211> 723

<212> DNA

<213> Mycobacterium tuberculosis

<400> 114

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<210> 115

<211> 5484

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 115

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<210> 116

<211> 4851

<212> DNA

<213> Mycobacterium tuberculosis

<400> 116

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<210> 117

<211> 2076

<212> DNA

<213> Mycobacterium tuberculosis

<400> 117

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<210> 118

<211> 1182

<212> DNA

<213> Mycobacterium tuberculosis

<400> 118

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<210> 119

<211> 3333

<212> DNA

<213> Mycobacterium tuberculosis

<400> 119

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<210> 120

<211> 1371

<212> DNA

<213> Mycobacterium tuberculosis

<400> 120

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<210> 121

<211> 642

<212> DNA

<213> Mycobacterium tuberculosis

<400> 121

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gaccgcccgc	gcccgggtgg	ccagctgcgc	cccctgctgg	caccggcctc	cgtcgactcc	420
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tacagtcgcg	gggaccggat	ccatgcgata	gcctgcccgg	tggaaacaacg	gcccgcgggt	600
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<210> 122

<211> 1227

<212> DNA

<213> Mycobacterium tuberculosis

<400> 122

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agcggccgagc	aggcgggtga	gggctacctg	cgggaagagc	gaatgggcat	tccgggtgtcc	360
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<210> 123

<211> 1080

<212> DNA

<213> Mycobacterium tuberculosis

<400> 123

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<210> 124

<211> 645

<212> DNA

<213> Mycobacterium tuberculosis

<400> 124

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tacagccaag	gcgggctgct	tccgatcgcc	tacacacaag	gcacgcactt	ccggccgggc	600
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<210> 125

<211> 990

<212> DNA

<213> Mycobacterium tuberculosis

<400> 125

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<210> 126

<211> 303

<212> DNA

<213> Mycobacterium tuberculosis

<400> 126

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<210> 127

<211> 1227

<212> DNA

<213> Mycobacterium tuberculosis

<400> 127

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<210> 128
 <211> 1503
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 128

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taa						1503

<210> 129
 <211> 1518
 <212> DNA
 <213> Mycobacterium tuberculosis

<400> 129

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<210> 130

<211> 819

<212> DNA

<213> Mycobacterium tuberculosis

<400> 130

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gatgtcgcca	tcgtggctac	cgggcatacc	gcgcccttgc	tgctgccgga	attgcacacc	720
gtcgaccatt	acgaccagca	cctgaccttg	cagggtctgc	ggctggtggt	cgagcgtaac	780
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<210> 131

<211> 567

<212> DNA

<213> Mycobacterium tuberculosis

<400> 131

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ccctgggggtg	gggtggagca	ggggcagttc	ctcaatgcgg	tgctgatcgc	cgacgatcct	180
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<210> 132

<211> 402

<212> DNA

<213> Mycobacterium tuberculosis

<400> 132

atggctgacc	gaatcgaact	gcgcggcctg	accgtgcatg	gtcggcacgg	ggtctacgac	60
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gaggccgcca	acagcgacga	cttgcccgac	acctatgact	acgtgcggct	ggcttcgcgg	180

gcggccgaga	tcgtcgccgg	acccccgcgg	aagctgatcg	aaacggtcgg	ggccgagatc	240
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caggcgccca	ttccgcagac	gttcgacgat	gtggcggtgg	tgatccgacg	ctcacggcgc	360
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<210> 133

<211> 843

<212> DNA

<213> Mycobacterium tuberculosis

<400> 133

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gcaggtgagg	gcatcgctga	cgtcggtggg	gagtcgagcc	ggcccggtgc	cactcggggt	180
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<210> 134

<211> 609

<212> DNA

<213> Mycobacterium tuberculosis

<400> 134

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cggaagtga						609

<210> 135

<211> 2283

<212> DNA

<213> Mycobacterium tuberculosis

<400> 135

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<210> 136

<211> 1194

<212> DNA

<213> Mycobacterium tuberculosis

<400> 136

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gcagccatcg	acgacgccga	aactgggttt	gtgctgacgg	ccggcgagg	ggcggggcag	1140
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<210> 137

<211> 2433

<212> DNA

<213> Mycobacterium tuberculosis

<400> 137

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<210> 138

<211> 1737

<212> DNA

<213> Mycobacterium tuberculosis

<400> 138

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<210> 139

<211> 843

<212> DNA

<213> Mycobacterium tuberculosis

<400> 139

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<210> 140

<211> 366

<212> DNA

<213> Mycobacterium tuberculosis

<400> 140

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<211> 1386

<212> DNA

<213> Mycobacterium tuberculosis

<400> 141

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<210> 142

<211> 765

<212> DNA

<213> Mycobacterium tuberculosis

<400> 142

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<212> DNA

<213> Mycobacterium tuberculosis

<400> 143

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<210> 144

<211> 3297

<212> DNA

<213> *Mycobacterium tuberculosis*

<400> 144

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<211> 1260

<212> DNA

<213> Mycobacterium tuberculosis

<400> 145

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<210> 146

<211> 1443

<212> DNA

<213> Mycobacterium tuberculosis

<400> 146

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ggcaagcccg ccaccgcgcg tcacgaaccc gacgggtggg tgagcttcca tcaccacgaa 960
gtggctcgcg ccaagatggg gcgcaagcgg atgcgggcgc tgaagtattc caagcagatg 1020
atcgacgaca tctcgagctt ggtctacctg catctgcggt ttcacggcta cggcgatggg 1080
aaatggaccg actctgcggt gcgccgtat gtcaccgacg ccggggccct actgccacgg 1140
ctgcacaagc tgggtgcgcg cgactgcacg acccgcaaca agcgccgggc cgcgcggttg 1200
caggccagtt acgaccggct ggaagagcgg atcgcgagc tggccgcccc ggaggatctg 1260
gatcggtgct gccccgacct ggacggcaac cagatcatgg cgggtgctcga cattccggcg 1320
ggccccgaag tcggcgaggc gtggcgctac ttgaaggagc tcgggctaga gcgcggcccg 1380
ttgtccaccg aggaggcgac aaccgagctg ctgtcctggt ggaaatcacg ggggaaccgc 1440
tag
1443

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<210> 147

<211> 402

<212> PRT

<213> Mycobacterium tuberculosis

<400> 147

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Met Asp Ala Ala Thr Thr Arg Val Gly Leu Thr Asp Leu Thr Phe Arg
1          5          10          15
Leu Leu Arg Glu Ser Phe Ala Asp Ala Val Ser Trp Val Ala Lys Asn
20          25          30
Leu Pro Ala Arg Pro Ala Val Pro Val Leu Ser Gly Val Leu Leu Thr
35          40          45
Gly Ser Asp Asn Gly Leu Thr Ile Ser Gly Phe Asp Tyr Glu Val Ser
50          55          60
Ala Glu Ala Gln Val Gly Ala Glu Ile Val Ser Pro Gly Ser Val Leu
65          70          75          80
Val Ser Gly Arg Leu Leu Ser Asp Ile Thr Arg Ala Leu Pro Asn Lys
85          90          95
Pro Val Asp Val His Val Glu Gly Asn Arg Val Ala Leu Thr Cys Gly
100         105         110
Asn Ala Arg Phe Ser Leu Pro Thr Met Pro Val Glu Asp Tyr Pro Thr
115         120         125
Leu Pro Thr Leu Pro Glu Glu Thr Gly Leu Leu Pro Ala Glu Leu Phe
130         135         140
Ala Glu Ala Ile Ser Gln Val Ala Ile Ala Ala Gly Arg Asp Asp Thr
145         150         155         160
Leu Pro Met Leu Thr Gly Ile Arg Val Glu Ile Leu Gly Glu Thr Val
165         170         175
Val Leu Ala Ala Thr Asp Arg Phe Arg Leu Ala Val Arg Glu Leu Lys
180         185         190
Trp Ser Ala Ser Ser Pro Asp Ile Glu Ala Ala Val Leu Val Pro Ala
195         200         205
Lys Thr Leu Ala Glu Ala Ala Lys Ala Gly Ile Gly Gly Ser Asp Val
210         215         220
Arg Leu Ser Leu Gly Thr Gly Pro Gly Val Gly Lys Asp Gly Leu Leu
225         230         235         240
Gly Ile Ser Gly Asn Gly Lys Arg Ser Thr Thr Arg Leu Leu Asp Ala
245         250         255
Glu Phe Pro Lys Phe Arg Gln Leu Leu Pro Thr Glu His Thr Ala Val
260         265         270

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Ala Thr Met Asp Val Ala Glu Leu Ile Glu Ala Ile Lys Leu Val Ala
 275 280 285
 Leu Val Ala Asp Arg Gly Ala Gln Val Arg Met Glu Phe Ala Asp Gly
 290 295 300
 Ser Val Arg Leu Ser Ala Gly Ala Asp Asp Val Gly Arg Ala Glu Glu
 305 310 315 320
 Asp Leu Val Val Asp Tyr Ala Gly Glu Pro Leu Thr Ile Ala Phe Asn
 325 330 335
 Pro Thr Tyr Leu Thr Asp Gly Leu Ser Ser Leu Arg Ser Glu Arg Val
 340 345 350
 Ser Phe Gly Phe Thr Thr Ala Gly Lys Pro Ala Leu Leu Arg Pro Val
 355 360 365
 Ser Gly Asp Asp Arg Pro Val Ala Gly Leu Asn Gly Asn Gly Pro Phe
 370 375 380
 Pro Ala Val Ser Thr Asp Tyr Val Tyr Leu Leu Met Pro Val Arg Leu
 385 390 395 400
 Pro Gly

<210> 148
 <211> 385
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 148
 Val Tyr Val Arg His Leu Gly Leu Arg Asp Phe Arg Ser Trp Ala Cys
 1 5 10 15
 Val Asp Leu Glu Leu His Pro Gly Arg Thr Val Phe Val Gly Pro Asn
 20 25 30
 Gly Tyr Gly Lys Thr Asn Leu Ile Glu Ala Leu Trp Tyr Ser Thr Thr
 35 40 45
 Leu Gly Ser His Arg Val Ser Ala Asp Leu Pro Leu Ile Arg Val Gly
 50 55 60
 Thr Asp Arg Ala Val Ile Ser Thr Ile Val Val Asn Asp Gly Arg Glu
 65 70 75 80
 Cys Ala Val Asp Leu Glu Ile Ala Thr Gly Arg Val Asn Lys Ala Arg
 85 90 95
 Leu Asn Arg Ser Ser Val Arg Ser Thr Arg Asp Val Val Gly Val Leu
 100 105 110
 Arg Ala Val Leu Phe Ala Pro Glu Asp Leu Gly Leu Val Arg Gly Asp
 115 120 125
 Pro Ala Asp Arg Arg Arg Tyr Leu Asp Asp Leu Ala Ile Val Arg Arg
 130 135 140
 Pro Ala Ile Ala Ala Val Arg Ala Glu Tyr Glu Arg Val Leu Arg Gln
 145 150 155 160
 Arg Thr Ala Leu Leu Lys Ser Val Pro Gly Ala Arg Tyr Arg Gly Asp
 165 170 175
 Arg Gly Val Phe Asp Thr Leu Glu Val Trp Asp Ser Arg Leu Ala Glu
 180 185 190
 His Gly Ala Glu Leu Val Ala Ala Arg Ile Asp Leu Val Asn Gln Leu
 195 200 205
 Ala Pro Glu Val Lys Lys Ala Tyr Gln Leu Leu Ala Pro Glu Ser Arg
 210 215 220
 Ser Ala Ser Ile Gly Tyr Arg Ala Ser Met Asp Val Thr Gly Pro Ser
 225 230 235 240
 Glu Gln Ser Asp Ile Asp Arg Gln Leu Leu Ala Ala Arg Leu Leu Ala
 245 250 255

Ala Leu Ala Ala Arg Arg Asp Ala Glu Leu Glu Arg Gly Val Cys Leu
 260 265 270
 Val Gly Pro His Arg Asp Asp Leu Ile Leu Arg Leu Gly Asp Gln Pro
 275 280 285
 Ala Lys Gly Phe Ala Ser His Gly Glu Ala Trp Ser Leu Ala Val Ala
 290 295 300
 Leu Arg Leu Ala Ala Tyr Gln Leu Leu Arg Val Asp Gly Gly Glu Pro
 305 310 315 320
 Val Leu Leu Leu Asp Asp Val Phe Ala Glu Leu Asp Val Met Arg Arg
 325 330 335
 Arg Ala Leu Ala Thr Ala Ala Glu Ser Ala Glu Gln Val Leu Val Thr
 340 345 350
 Ala Ala Val Leu Glu Asp Ile Pro Ala Gly Trp Asp Ala Arg Arg Val
 355 360 365
 His Ile Asp Val Arg Ala Asp Asp Thr Gly Ser Met Ser Val Val Leu
 370 375 380
 Pro
 385

<210> 149

<211> 714

<212> PRT

<213> Mycobacterium tuberculosis

<400> 149

Met Gly Lys Asn Glu Ala Arg Arg Ser Ala Leu Ala Pro Asp His Gly
 1 5 10 15
 Thr Val Val Cys Asp Pro Leu Arg Arg Leu Asn Arg Met His Ala Thr
 20 25 30
 Pro Glu Glu Ser Ile Arg Ile Val Ala Ala Gln Lys Lys Lys Ala Gln
 35 40 45
 Asp Glu Tyr Gly Ala Ala Ser Ile Thr Ile Leu Glu Gly Leu Glu Ala
 50 55 60
 Val Arg Lys Arg Pro Gly Met Tyr Ile Gly Ser Thr Gly Glu Arg Gly
 65 70 75 80
 Leu His His Leu Ile Trp Glu Val Val Asp Asn Ala Val Asp Glu Ala
 85 90 95
 Met Ala Gly Tyr Ala Thr Thr Val Asn Val Val Leu Leu Glu Asp Gly
 100 105 110
 Gly Val Glu Val Ala Asp Asp Gly Arg Gly Ile Pro Val Ala Thr His
 115 120 125
 Ala Ser Gly Ile Pro Thr Val Asp Val Val Met Thr Gln Leu His Ala
 130 135 140
 Gly Gly Lys Phe Asp Ser Asp Ala Tyr Ala Ile Ser Gly Gly Leu His
 145 150 155 160
 Gly Val Gly Val Ser Val Val Asn Ala Leu Ser Thr Arg Leu Glu Val
 165 170 175
 Glu Ile Lys Arg Asp Gly Tyr Glu Trp Ser Gln Val Tyr Glu Lys Ser
 180 185 190
 Glu Pro Leu Gly Leu Lys Gln Gly Ala Pro Thr Lys Lys Thr Gly Ser
 195 200 205
 Thr Val Arg Phe Trp Ala Asp Pro Ala Val Phe Glu Thr Thr Glu Tyr
 210 215 220
 Asp Phe Glu Thr Val Ala Arg Arg Leu Gln Glu Met Ala Phe Leu Asn
 225 230 235 240
 Lys Gly Leu Thr Ile Asn Leu Thr Asp Glu Arg Val Thr Gln Asp Glu
 245 250 255

Val Val Asp Glu Val Val Ser Asp Val Ala Glu Ala Pro Lys Ser Ala
 260 265 270
 Ser Glu Arg Ala Ala Glu Ser Thr Ala Pro His Lys Val Lys Ser Arg
 275 280 285
 Thr Phe His Tyr Pro Gly Gly Leu Val Asp Phe Val Lys His Ile Asn
 290 295 300
 Arg Thr Lys Asn Ala Ile His Ser Ser Ile Val Asp Phe Ser Gly Lys
 305 310 315 320
 Gly Thr Gly His Glu Val Glu Ile Ala Met Gln Trp Asn Ala Gly Tyr
 325 330 335
 Ser Glu Ser Val His Thr Phe Ala Asn Thr Ile Asn Thr His Glu Gly
 340 345 350
 Gly Thr His Glu Glu Gly Phe Arg Ser Ala Leu Thr Ser Val Val Asn
 355 360 365
 Lys Tyr Ala Lys Asp Arg Lys Leu Leu Lys Asp Lys Asp Pro Asn Leu
 370 375 380
 Thr Gly Asp Asp Ile Arg Glu Gly Leu Ala Ala Val Ile Ser Val Lys
 385 390 395 400
 Val Ser Glu Pro Gln Phe Glu Gly Gln Thr Lys Thr Lys Leu Gly Asn
 405 410 415
 Thr Glu Val Lys Ser Phe Val Gln Lys Val Cys Asn Glu Gln Leu Thr
 420 425 430
 His Trp Phe Glu Ala Asn Pro Thr Asp Ala Lys Val Val Val Asn Lys
 435 440 445
 Ala Val Ser Ser Ala Gln Ala Arg Ile Ala Ala Arg Lys Ala Arg Glu
 450 455 460
 Leu Val Arg Arg Lys Ser Ala Thr Asp Ile Gly Gly Leu Pro Gly Lys
 465 470 475 480
 Leu Ala Asp Cys Arg Ser Thr Asp Pro Arg Lys Ser Glu Leu Tyr Val
 485 490 495
 Val Glu Gly Asp Ser Ala Gly Gly Ser Ala Lys Ser Gly Arg Asp Ser
 500 505 510
 Met Phe Gln Ala Ile Leu Pro Leu Arg Gly Lys Ile Ile Asn Val Glu
 515 520 525
 Lys Ala Arg Ile Asp Arg Val Leu Lys Asn Thr Glu Val Gln Ala Ile
 530 535 540
 Ile Thr Ala Leu Gly Thr Gly Ile His Asp Glu Phe Asp Ile Gly Lys
 545 550 555 560
 Leu Arg Tyr His Lys Ile Val Leu Met Ala Asp Ala Asp Val Asp Gly
 565 570 575
 Gln His Ile Ser Thr Leu Leu Leu Thr Leu Leu Phe Arg Phe Met Arg
 580 585 590
 Pro Leu Ile Glu Asn Gly His Val Phe Leu Ala Gln Pro Pro Leu Tyr
 595 600 605
 Lys Leu Lys Trp Gln Arg Ser Asp Pro Glu Phe Ala Tyr Ser Asp Arg
 610 615 620
 Glu Arg Asp Gly Leu Leu Glu Ala Gly Leu Lys Ala Gly Lys Lys Ile
 625 630 635 640
 Asn Lys Glu Asp Gly Ile Gln Arg Tyr Lys Gly Leu Gly Glu Met Asp
 645 650 655
 Ala Lys Glu Leu Trp Glu Thr Thr Met Asp Pro Ser Val Arg Val Leu
 660 665 670
 Arg Gln Val Thr Leu Asp Asp Ala Ala Ala Ala Asp Glu Leu Phe Ser
 675 680 685
 Ile Leu Met Gly Glu Asp Val Asp Ala Arg Arg Ser Phe Ile Thr Arg
 690 695 700
 Asn Ala Lys Asp Val Arg Phe Leu Asp Val

705

710

<210> 150

<211> 838

<212> PRT

<213> Mycobacterium tuberculosis

<400> 150

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Met Thr Asp Thr Thr Leu Pro Pro Asp Asp Ser Leu Asp Arg Ile Glu
 1          5          10          15
Pro Val Asp Ile Glu Gln Glu Met Gln Arg Ser Tyr Ile Asp Tyr Ala
 20          25          30
Met Ser Val Ile Val Gly Arg Ala Leu Pro Glu Val Arg Asp Gly Leu
 35          40          45
Lys Pro Val His Arg Arg Val Leu Tyr Ala Met Phe Asp Ser Gly Phe
 50          55          60
Arg Pro Asp Arg Ser His Ala Lys Ser Ala Arg Ser Val Ala Glu Thr
 65          70          75          80
Met Gly Asn Tyr His Pro His Gly Asp Ala Ser Ile Tyr Asp Ser Leu
 85          90          95
Val Arg Met Ala Gln Pro Trp Ser Leu Arg Tyr Pro Leu Val Asp Gly
 100         105         110
Gln Gly Asn Phe Gly Ser Pro Gly Asn Asp Pro Pro Ala Ala Met Arg
 115         120         125
Tyr Thr Glu Ala Arg Leu Thr Pro Leu Ala Met Glu Met Leu Arg Glu
 130         135         140
Ile Asp Glu Glu Thr Val Asp Phe Ile Pro Asn Tyr Asp Gly Arg Val
 145         150         155         160
Gln Glu Pro Thr Val Leu Pro Ser Arg Phe Pro Asn Leu Leu Ala Asn
 165         170         175
Gly Ser Gly Gly Ile Ala Val Gly Met Ala Thr Asn Ile Pro Pro His
 180         185         190
Asn Leu Arg Glu Leu Ala Asp Ala Val Phe Trp Ala Leu Glu Asn His
 195         200         205
Asp Ala Asp Glu Glu Glu Thr Leu Ala Ala Val Met Gly Arg Val Lys
 210         215         220
Gly Pro Asp Phe Pro Thr Ala Gly Leu Ile Val Gly Ser Gln Gly Thr
 225         230         235         240
Ala Asp Ala Tyr Lys Thr Gly Arg Gly Ser Ile Arg Met Arg Gly Val
 245         250         255
Val Glu Val Glu Asp Ser Arg Gly Arg Thr Ser Leu Val Ile Thr
 260         265         270
Glu Leu Pro Tyr Gln Val Asn His Asp Asn Phe Ile Thr Ser Ile Ala
 275         280         285
Glu Gln Val Arg Asp Gly Lys Leu Ala Gly Ile Ser Asn Ile Glu Asp
 290         295         300
Gln Ser Ser Asp Arg Val Gly Leu Arg Ile Val Ile Glu Ile Lys Arg
 305         310         315         320
Asp Ala Val Ala Lys Val Val Ile Asn Asn Leu Tyr Lys His Thr Gln
 325         330         335
Leu Gln Thr Ser Phe Gly Ala Asn Met Leu Ala Ile Val Asp Gly Val
 340         345         350
Pro Arg Thr Leu Arg Leu Asp Gln Leu Ile Arg Tyr Tyr Val Asp His
 355         360         365
Gln Leu Asp Val Ile Val Arg Arg Thr Thr Tyr Arg Leu Arg Lys Ala
 370         375         380
Asn Glu Arg Ala His Ile Leu Arg Gly Leu Val Lys Ala Leu Asp Ala

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385					390					395					400
Leu	Asp	Glu	Val	Ile	Ala	Leu	Ile	Arg	Ala	Ser	Glu	Thr	Val	Asp	Ile
				405					410					415	
Ala	Arg	Ala	Gly	Leu	Ile	Glu	Leu	Leu	Asp	Ile	Asp	Glu	Ile	Gln	Ala
			420					425					430		
Gln	Ala	Ile	Leu	Asp	Met	Gln	Leu	Arg	Arg	Leu	Ala	Ala	Leu	Glu	Arg
		435					440					445			
Gln	Arg	Ile	Ile	Asp	Asp	Leu	Ala	Lys	Ile	Glu	Ala	Glu	Ile	Ala	Asp
	450				455					460					
Leu	Glu	Asp	Ile	Leu	Ala	Lys	Pro	Glu	Arg	Gln	Arg	Gly	Ile	Val	Arg
465				470						475					480
Asp	Glu	Leu	Ala	Glu	Ile	Val	Asp	Arg	His	Gly	Asp	Asp	Arg	Arg	Thr
				485					490					495	
Arg	Ile	Ile	Ala	Ala	Asp	Gly	Asp	Val	Ser	Asp	Glu	Asp	Leu	Ile	Ala
			500					505					510		
Arg	Glu	Asp	Val	Val	Val	Thr	Ile	Thr	Glu	Thr	Gly	Tyr	Ala	Lys	Arg
		515					520					525			
Thr	Lys	Thr	Asp	Leu	Tyr	Arg	Ser	Gln	Lys	Arg	Gly	Gly	Lys	Gly	Val
	530					535					540				
Gln	Gly	Ala	Gly	Leu	Lys	Gln	Asp	Asp	Ile	Val	Ala	His	Phe	Phe	Val
545				550						555					560
Cys	Ser	Thr	His	Asp	Leu	Ile	Leu	Phe	Phe	Thr	Thr	Gln	Gly	Arg	Val
				565					570					575	
Tyr	Arg	Ala	Lys	Ala	Tyr	Asp	Leu	Pro	Glu	Ala	Ser	Arg	Thr	Ala	Arg
			580					585					590		
Gly	Gln	His	Val	Ala	Asn	Leu	Leu	Ala	Phe	Gln	Pro	Glu	Glu	Arg	Ile
		595				600						605			
Ala	Gln	Val	Ile	Gln	Ile	Arg	Gly	Tyr	Thr	Asp	Ala	Pro	Tyr	Leu	Val
	610					615					620				
Leu	Ala	Thr	Arg	Asn	Gly	Leu	Val	Lys	Lys	Ser	Lys	Leu	Thr	Asp	Phe
625				630						635					640
Asp	Ser	Asn	Arg	Ser	Gly	Gly	Ile	Val	Ala	Val	Asn	Leu	Arg	Asp	Asn
				645					650					655	
Asp	Glu	Leu	Val	Gly	Ala	Val	Leu	Cys	Ser	Ala	Gly	Asp	Asp	Leu	Leu
			660					665					670		
Leu	Val	Ser	Ala	Asn	Gly	Gln	Ser	Ile	Arg	Phe	Ser	Ala	Thr	Asp	Glu
		675				680						685			
Ala	Leu	Arg	Pro	Met	Gly	Arg	Ala	Thr	Ser	Gly	Val	Gln	Gly	Met	Arg
	690				695						700				
Phe	Asn	Ile	Asp	Asp	Arg	Leu	Leu	Ser	Leu	Asn	Val	Val	Arg	Glu	Gly
705				710						715					720
Thr	Tyr	Leu	Leu	Val	Ala	Thr	Ser	Gly	Gly	Tyr	Ala	Lys	Arg	Thr	Ala
				725				730						735	
Ile	Glu	Glu	Tyr	Pro	Val	Gln	Gly	Arg	Gly	Gly	Lys	Gly	Val	Leu	Thr

<210> 151
 <211> 626
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 151

Met	Thr	Thr	Pro	Ser	His	Leu	Ser	Asp	Arg	Tyr	Glu	Leu	Gly	Glu	Ile
1				5					10					15	
Leu	Gly	Phe	Gly	Gly	Met	Ser	Glu	Val	His	Leu	Ala	Arg	Asp	Leu	Arg
			20					25					30		
Leu	His	Arg	Asp	Val	Ala	Val	Lys	Val	Leu	Arg	Ala	Asp	Leu	Ala	Arg
		35					40					45			
Asp	Pro	Ser	Phe	Tyr	Leu	Arg	Phe	Arg	Arg	Glu	Ala	Gln	Asn	Ala	Ala
	50					55					60				
Ala	Leu	Asn	His	Pro	Ala	Ile	Val	Ala	Val	Tyr	Asp	Thr	Gly	Glu	Ala
65					70					75					80
Glu	Thr	Pro	Ala	Gly	Pro	Leu	Pro	Tyr	Ile	Val	Met	Glu	Tyr	Val	Asp
				85					90					95	
Gly	Val	Thr	Leu	Arg	Asp	Ile	Val	His	Thr	Glu	Gly	Pro	Met	Thr	Pro
			100					105					110		
Lys	Arg	Ala	Ile	Glu	Val	Ile	Ala	Asp	Ala	Cys	Gln	Ala	Leu	Asn	Phe
		115					120					125			
Ser	His	Gln	Asn	Gly	Ile	Ile	His	Arg	Asp	Val	Lys	Pro	Ala	Asn	Ile
	130					135					140				
Met	Ile	Ser	Ala	Thr	Asn	Ala	Val	Lys	Val	Met	Asp	Phe	Gly	Ile	Ala
145					150					155					160
Arg	Ala	Ile	Ala	Asp	Ser	Gly	Asn	Ser	Val	Thr	Gln	Thr	Ala	Ala	Val
				165					170					175	
Ile	Gly	Thr	Ala	Gln	Tyr	Leu	Ser	Pro	Glu	Gln	Ala	Arg	Gly	Asp	Ser
			180					185					190		
Val	Asp	Ala	Arg	Ser	Asp	Val	Tyr	Ser	Leu	Gly	Cys	Val	Leu	Tyr	Glu
		195					200					205			
Val	Leu	Thr	Gly	Glu	Pro	Pro	Phe	Thr	Gly	Asp	Ser	Pro	Val	Ser	Val
	210					215					220				
Ala	Tyr	Gln	His	Val	Arg	Glu	Asp	Pro	Ile	Pro	Pro	Ser	Ala	Arg	His
225					230					235					240
Glu	Gly	Leu	Ser	Ala	Asp	Leu	Asp	Ala	Val	Val	Leu	Lys	Ala	Leu	Ala
				245					250					255	
Lys	Asn	Pro	Glu	Asn	Arg	Tyr	Gln	Thr	Ala	Ala	Glu	Met	Arg	Ala	Asp
		260						265					270		
Leu	Val	Arg	Val	His	Asn	Gly	Glu	Pro	Pro	Glu	Ala	Pro	Lys	Val	Leu
		275					280					285			
Thr	Asp	Ala	Glu	Arg	Thr	Ser	Leu	Leu	Ser	Ser	Ala	Ala	Gly	Asn	Leu
	290					295					300				
Ser	Gly	Pro	Arg	Thr	Asp	Pro	Leu	Pro	Arg	Gln	Asp	Leu	Asp	Asp	Thr
305					310					315					320
Asp	Arg	Asp	Arg	Ser	Ile	Gly	Ser	Val	Gly	Arg	Trp	Val	Ala	Val	Val
				325					330					335	
Ala	Val	Leu	Ala	Val	Leu	Thr	Val	Val	Val	Thr	Ile	Ala	Ile	Asn	Thr
			340					345					350		
Phe	Gly	Gly	Ile	Thr	Arg	Asp	Val	Gln	Val	Pro	Asp	Val	Arg	Gly	Gln
	355					360					365				
Ser	Ser	Ala	Asp	Ala	Ile	Ala	Thr	Leu	Gln	Asn	Arg	Gly	Phe	Lys	Ile
	370					375					380				
Arg	Thr	Leu	Gln	Lys	Pro	Asp	Ser	Thr	Ile	Pro	Pro	Asp	His	Val	Ile
385					390					395					400

Gly Thr Asp Pro Ala Ala Asn Thr Ser Val Ser Ala Gly Asp Glu Ile
 405 410 415
 Thr Val Asn Val Ser Thr Gly Pro Glu Gln Arg Glu Ile Pro Asp Val
 420 425 430
 Ser Thr Leu Thr Tyr Ala Glu Ala Val Lys Lys Leu Thr Ala Ala Gly
 435 440 445
 Phe Gly Arg Phe Lys Gln Ala Asn Ser Pro Ser Thr Pro Glu Leu Val
 450 455 460
 Gly Lys Val Ile Gly Thr Asn Pro Pro Ala Asn Gln Thr Ser Ala Ile
 465 470 475 480
 Thr Asn Val Val Ile Ile Ile Val Gly Ser Gly Pro Ala Thr Lys Asp
 485 490 495
 Ile Pro Asp Val Ala Gly Gln Thr Val Asp Val Ala Gln Lys Asn Leu
 500 505 510
 Asn Val Tyr Gly Phe Thr Lys Phe Ser Gln Ala Ser Val Asp Ser Pro
 515 520 525
 Arg Pro Ala Gly Glu Val Thr Gly Thr Asn Pro Pro Ala Gly Thr Thr
 530 535 540
 Val Pro Val Asp Ser Val Ile Glu Leu Gln Val Ser Lys Gly Asn Gln
 545 550 555 560
 Phe Val Met Pro Asp Leu Ser Gly Met Phe Trp Val Asp Ala Glu Pro
 565 570 575
 Arg Leu Arg Ala Leu Gly Trp Thr Gly Met Leu Asp Lys Gly Ala Asp
 580 585 590
 Val Asp Ala Gly Gly Ser Gln His Asn Arg Val Val Tyr Gln Asn Pro
 595 600 605
 Pro Ala Gly Thr Gly Val Asn Arg Asp Gly Ile Ile Thr Leu Arg Phe
 610 615 620
 Gly Gln
 625

<210> 152

<211> 491

<212> PRT

<213> Mycobacterium tuberculosis

<400> 152

Met Asn Ala Ser Leu Arg Arg Ile Ser Val Thr Val Met Ala Leu Ile
 1 5 10 15
 Val Leu Leu Leu Leu Asn Ala Thr Met Thr Gln Val Phe Thr Ala Asp
 20 25 30
 Gly Leu Arg Ala Asp Pro Arg Asn Gln Arg Val Leu Leu Asp Glu Tyr
 35 40 45
 Ser Arg Gln Arg Gly Gln Ile Thr Ala Gly Gly Gln Leu Leu Ala Tyr
 50 55 60
 Ser Val Ala Thr Asp Gly Arg Phe Arg Phe Leu Arg Val Tyr Pro Asn
 65 70 75 80
 Pro Glu Val Tyr Ala Pro Val Thr Gly Phe Tyr Ser Leu Arg Tyr Ser
 85 90 95
 Ser Thr Ala Leu Glu Arg Ala Glu Asp Pro Ile Leu Asn Gly Ser Asp
 100 105 110
 Arg Arg Leu Phe Gly Arg Arg Leu Ala Asp Phe Phe Thr Gly Arg Asp
 115 120 125
 Pro Arg Gly Gly Asn Val Asp Thr Thr Ile Asn Pro Arg Ile Gln Gln
 130 135 140
 Ala Gly Trp Asp Ala Met Gln Gln Gly Cys Tyr Gly Pro Cys Lys Gly
 145 150 155 160

Ala Val Val Ala Leu Glu Pro Ser Thr Gly Lys Ile Leu Ala Leu Val
 165 170 175
 Ser Ser Pro Ser Tyr Asp Pro Asn Leu Leu Ala Ser His Asn Pro Glu
 180 185 190
 Val Gln Ala Gln Ala Trp Gln Arg Leu Gly Asp Asn Pro Ala Ser Pro
 195 200 205
 Leu Thr Asn Arg Ala Ile Ser Glu Thr Tyr Pro Pro Gly Ser Thr Phe
 210 215 220
 Lys Val Ile Thr Thr Ala Ala Ala Leu Ala Ala Gly Ala Thr Glu Thr
 225 230 235 240
 Glu Gln Leu Thr Ala Ala Pro Thr Ile Pro Leu Pro Gly Ser Thr Ala
 245 250 255
 Gln Leu Glu Asn Tyr Gly Gly Ala Pro Cys Gly Asp Glu Pro Thr Val
 260 265 270
 Ser Leu Arg Glu Ala Phe Val Lys Ser Cys Asn Thr Ala Phe Val Gln
 275 280 285
 Leu Gly Ile Arg Thr Gly Ala Asp Ala Leu Arg Ser Met Ala Arg Ala
 290 295 300
 Phe Gly Leu Asp Ser Pro Pro Arg Pro Thr Pro Leu Gln Val Ala Glu
 305 310 315 320
 Ser Thr Val Gly Pro Ile Pro Asp Ser Ala Ala Leu Gly Met Thr Ser
 325 330 335
 Ile Gly Gln Lys Asp Val Ala Leu Thr Pro Leu Ala Asn Ala Glu Ile
 340 345 350
 Ala Ala Thr Ile Ala Asn Gly Gly Ile Thr Met Arg Pro Tyr Leu Val
 355 360 365
 Gly Ser Leu Lys Gly Pro Asp Leu Ala Asn Ile Ser Thr Thr Val Gly
 370 375 380
 Tyr Gln Gln Arg Arg Ala Val Ser Pro Gln Val Ala Ala Lys Leu Thr
 385 390 395 400
 Glu Leu Met Val Gly Ala Glu Lys Val Ala Gln Gln Lys Gly Ala Ile
 405 410 415
 Pro Gly Val Gln Ile Ala Ser Lys Thr Gly Thr Ala Glu His Gly Thr
 420 425 430
 Asp Pro Arg His Thr Pro Pro His Ala Trp Tyr Ile Ala Phe Ala Pro
 435 440 445
 Ala Gln Ala Pro Lys Val Ala Val Ala Val Leu Val Glu Asn Gly Ala
 450 455 460
 Asp Arg Leu Ser Ala Thr Gly Gly Ala Leu Ala Ala Pro Ile Gly Arg
 465 470 475 480
 Ala Val Ile Glu Ala Ala Leu Gln Gly Glu Pro
 485 490

<210> 153

<211> 469

<212> PRT

<213> Mycobacterium tuberculosis

<400> 153

Met Thr Thr Arg Leu Gln Ala Pro Val Ala Val Thr Pro Pro Leu Pro
 1 5 10 15
 Thr Arg Arg Asn Ala Glu Leu Leu Leu Leu Cys Phe Ala Ala Val Ile
 20 25 30
 Thr Phe Ala Ala Leu Leu Val Val Gln Ala Asn Gln Asp Gln Gly Val
 35 40 45
 Pro Trp Asp Leu Thr Ser Tyr Gly Leu Ala Phe Leu Thr Leu Phe Gly
 50 55 60

Ser Ala His Leu Ala Ile Arg Arg Phe Ala Pro Tyr Thr Asp Pro Leu
 65 70 75 80
 Leu Leu Pro Val Val Ala Leu Leu Asn Gly Leu Gly Leu Val Met Ile
 85 90 95
 His Arg Leu Asp Leu Val Asp Asn Glu Ile Gly Glu His Arg His Pro
 100 105 110
 Ser Ala Asn Gln Gln Met Leu Trp Thr Leu Val Gly Val Ala Ala Phe
 115 120 125
 Ala Leu Val Val Thr Phe Leu Lys Asp His Arg Gln Leu Ala Arg Tyr
 130 135 140
 Gly Tyr Ile Cys Gly Leu Ala Gly Leu Val Phe Leu Ala Val Pro Ala
 145 150 155 160
 Leu Leu Pro Ala Ala Leu Ser Glu Gln Asn Gly Ala Lys Ile Trp Ile
 165 170 175
 Arg Leu Pro Gly Phe Ser Ile Gln Pro Ala Glu Phe Ser Lys Ile Leu
 180 185 190
 Leu Leu Ile Phe Phe Ser Ala Val Leu Val Ala Lys Arg Gly Leu Phe
 195 200 205
 Thr Ser Ala Gly Lys His Leu Leu Gly Met Thr Leu Pro Arg Pro Arg
 210 215 220
 Asp Leu Ala Pro Leu Leu Ala Ala Trp Val Ile Ser Val Gly Val Met
 225 230 235 240
 Val Phe Glu Lys Asp Leu Gly Ala Ser Leu Leu Leu Tyr Thr Ser Phe
 245 250 255
 Leu Val Val Val Tyr Leu Ala Thr Gln Arg Phe Ser Trp Val Val Ile
 260 265 270
 Gly Leu Thr Leu Phe Ala Ala Gly Thr Leu Val Ala Tyr Phe Ile Phe
 275 280 285
 Glu His Val Arg Leu Arg Val Gln Thr Trp Leu Asp Pro Phe Ala Asp
 290 295 300
 Pro Asp Gly Thr Gly Tyr Gln Ile Val Gln Ser Leu Phe Ser Phe Ala
 305 310 315 320
 Thr Gly Gly Ile Phe Gly Thr Gly Leu Gly Asn Gly Gln Pro Asp Thr
 325 330 335
 Val Pro Ala Ala Ser Thr Asp Phe Ile Ile Ala Ala Phe Gly Glu Glu
 340 345 350
 Leu Gly Leu Val Gly Leu Thr Ala Ile Leu Met Leu Tyr Thr Ile Val
 355 360 365
 Ile Ile Arg Gly Leu Arg Thr Ala Ile Ala Thr Arg Asp Ser Phe Gly
 370 375 380
 Lys Leu Leu Ala Ala Gly Leu Ser Ser Thr Leu Ala Ile Gln Leu Phe
 385 390 395 400
 Ile Val Val Gly Gly Val Thr Arg Leu Ile Pro Leu Thr Gly Leu Thr
 405 410 415
 Thr Pro Trp Met Ser Tyr Gly Gly Ser Ser Leu Leu Ala Asn Tyr Ile
 420 425 430
 Leu Leu Ala Ile Leu Ala Arg Ile Ser His Gly Ala Arg Arg Pro Leu
 435 440 445
 Arg Thr Arg Pro Arg Asn Lys Ser Pro Ile Thr Ala Ala Gly Thr Glu
 450 455 460
 Val Ile Glu Arg Val
 465

<210> 154

<211> 514

<212> PRT

<213> Mycobacterium tuberculosis

<400> 154

Val	Ala	Arg	Val	Thr	Leu	Val	Leu	Arg	Tyr	Ala	Ala	Arg	Ser	Asp	Arg
1				5					10					15	
Gly	Leu	Val	Arg	Ala	Asn	Asn	Glu	Asp	Ser	Val	Tyr	Ala	Gly	Ala	Arg
			20					25					30		
Leu	Leu	Ala	Leu	Ala	Asp	Gly	Met	Gly	Gly	His	Ala	Ala	Gly	Glu	Val
		35					40					45			
Ala	Ser	Gln	Leu	Val	Ile	Ala	Ala	Leu	Ala	His	Leu	Asp	Asp	Asp	Glu
	50					55					60				
Pro	Gly	Gly	Asp	Leu	Leu	Ala	Lys	Leu	Asp	Ala	Ala	Val	Arg	Ala	Gly
65					70				75					80	
Asn	Ser	Ala	Ile	Ala	Ala	Gln	Val	Glu	Met	Glu	Pro	Asp	Leu	Glu	Gly
			85					90					95		
Met	Gly	Thr	Thr	Leu	Thr	Ala	Ile	Leu	Phe	Ala	Gly	Asn	Arg	Leu	Gly
			100					105					110		
Leu	Val	His	Ile	Gly	Asp	Ser	Arg	Gly	Tyr	Leu	Leu	Arg	Asp	Gly	Glu
		115					120					125			
Leu	Thr	Gln	Ile	Thr	Lys	Asp	Asp	Thr	Phe	Val	Gln	Thr	Leu	Val	Asp
	130					135					140				
Glu	Gly	Arg	Ile	Thr	Pro	Glu	Glu	Ala	His	Ser	His	Pro	Gln	Arg	Ser
145					150					155				160	
Leu	Ile	Met	Arg	Ala	Leu	Thr	Gly	His	Glu	Val	Glu	Pro	Thr	Leu	Thr
			165					170						175	
Met	Arg	Glu	Ala	Arg	Ala	Gly	Asp	Arg	Tyr	Leu	Leu	Cys	Ser	Asp	Gly
		180					185						190		
Leu	Ser	Asp	Pro	Val	Ser	Asp	Glu	Thr	Ile	Leu	Glu	Ala	Leu	Gln	Ile
	195						200					205			
Pro	Glu	Val	Ala	Glu	Ser	Ala	His	Arg	Leu	Ile	Glu	Leu	Ala	Leu	Arg
	210					215					220				
Gly	Gly	Gly	Pro	Asp	Asn	Val	Thr	Val	Val	Val	Ala	Asp	Val	Val	Asp
225					230					235				240	
Tyr	Asp	Tyr	Gly	Gln	Thr	Gln	Pro	Ile	Leu	Ala	Gly	Ala	Val	Ser	Gly
			245					250						255	
Asp	Asp	Asp	Gln	Leu	Thr	Leu	Pro	Asn	Thr	Ala	Ala	Gly	Arg	Ala	Ser
		260					265						270		
Ala	Ile	Ser	Gln	Arg	Lys	Glu	Ile	Val	Lys	Arg	Val	Pro	Pro	Gln	Ala
	275					280						285			
Asp	Thr	Phe	Ser	Arg	Pro	Arg	Trp	Ser	Gly	Arg	Arg	Leu	Ala	Phe	Val
	290					295					300				
Val	Ala	Leu	Val	Thr	Val	Leu	Met	Thr	Ala	Gly	Leu	Leu	Ile	Gly	Arg
305					310					315				320	
Ala	Ile	Ile	Arg	Ser	Asn	Tyr	Tyr	Val	Ala	Asp	Tyr	Ala	Gly	Ser	Val
			325					330						335	
Ser	Ile	Met	Arg	Gly	Ile	Gln	Gly	Ser	Leu	Leu	Gly	Met	Ser	Leu	His
		340					345						350		
Gln	Pro	Tyr	Leu	Met	Gly	Cys	Leu	Ser	Pro	Arg	Asn	Glu	Leu	Ser	Gln
	355						360					365			
Ile	Ser	Tyr	Gly	Gln	Ser	Gly	Gly	Pro	Leu	Asp	Cys	His	Leu	Met	Lys
	370					375					380				
Leu	Glu	Asp	Leu	Arg	Pro	Pro	Glu	Arg	Ala	Gln	Val	Arg	Ala	Gly	Leu
385				390						395				400	
Pro	Ala	Gly	Thr	Leu	Asp	Asp	Ala	Ile	Gly	Gln	Leu	Arg	Glu	Leu	Ala
			405					410						415	
Ala	Asn	Ser	Leu	Leu	Pro	Pro	Cys	Pro	Ala	Pro	Arg	Ala	Thr	Ser	Pro
		420						425				430			
Pro	Gly	Arg	Pro	Ala	Pro	Pro	Thr	Thr	Ser	Glu	Thr	Thr	Glu	Pro	Asn

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      435              440              445
Val Thr Ser Ser Pro Ala Ser Pro Ser Pro Thr Thr Ser Ala Pro Ala
      450              455              460
Pro Thr Gly Thr Thr Pro Ala Ile Pro Thr Ser Ala Ser Pro Ala Ala
465              470              475              480
Pro Ala Ser Pro Pro Thr Pro Trp Pro Val Thr Ser Ser Pro Thr Met
      485              490              495
Ala Ala Leu Pro Pro Pro Pro Pro Gln Pro Gly Ile Asp Cys Arg Ala
      500              505              510
Ala Ala

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<210> 155
 <211> 155
 <212> PRT
 <213> Mycobacterium tuberculosis

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<400> 155
Met Gln Gly Leu Val Leu Gln Leu Thr Arg Ala Gly Phe Leu Met Leu
  1              5              10              15
Leu Trp Val Phe Ile Trp Ser Val Leu Arg Ile Leu Lys Thr Asp Ile
      20              25              30
Tyr Ala Pro Thr Gly Ala Val Met Met Arg Arg Gly Leu Ala Leu Arg
      35              40              45
Gly Thr Leu Leu Gly Ala Arg Gln Arg Arg His Ala Ala Arg Tyr Leu
      50              55              60
Val Val Thr Glu Gly Ala Leu Thr Gly Ala Arg Ile Thr Leu Ser Glu
      65              70              75              80
Gln Pro Val Leu Ile Gly Arg Ala Asp Asp Ser Thr Leu Val Leu Thr
      85              90              95
Asp Asp Tyr Ala Ser Thr Arg His Ala Arg Leu Ser Met Arg Gly Ser
      100             105             110
Glu Trp Tyr Val Glu Asp Leu Gly Ser Thr Asn Gly Thr Tyr Leu Asp
      115             120             125
Arg Ala Lys Val Thr Thr Ala Val Arg Val Pro Ile Gly Thr Pro Val
      130             135             140
Arg Ile Gly Lys Thr Ala Ile Glu Leu Arg Pro
      145             150             155

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<210> 156
 <211> 527
 <212> PRT
 <213> Mycobacterium tuberculosis

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<400> 156
Met Gly Ser Gln Lys Arg Leu Val Gln Arg Val Glu Arg Lys Leu Glu
  1              5              10              15
Gln Thr Val Gly Asp Ala Phe Ala Arg Ile Phe Gly Gly Ser Ile Val
      20              25              30
Pro Gln Glu Val Glu Ala Leu Leu Arg Arg Glu Ala Ala Asp Gly Ile
      35              40              45
Gln Ser Leu Gln Gly Asn Arg Leu Leu Ala Pro Asn Glu Tyr Ile Ile
      50              55              60
Thr Leu Gly Val His Asp Phe Glu Lys Leu Gly Ala Asp Pro Glu Leu
      65              70              75              80
Lys Ser Thr Gly Phe Ala Arg Asp Leu Ala Asp Tyr Ile Gln Glu Gln
      85              90              95

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Gly Trp Gln Thr Tyr Gly Asp Val Val Val Arg Phe Glu Gln Ser Ser
 100 105 110
 Asn Leu His Thr Gly Gln Phe Arg Ala Arg Gly Thr Val Asn Pro Asp
 115 120 125
 Val Glu Thr His Pro Pro Val Ile Asp Cys Ala Arg Pro Gln Ser Asn
 130 135 140
 His Ala Phe Gly Ala Glu Pro Gly Val Ala Pro Met Ser Asp Asn Ser
 145 150 155 160
 Ser Tyr Arg Gly Gly Gln Gly Gln Gly Arg Pro Asp Glu Tyr Tyr Asp
 165 170 175
 Asp Arg Tyr Ala Arg Pro Gln Glu Asp Pro Arg Gly Gly Pro Asp Pro
 180 185 190
 Gln Gly Gly Ser Asp Pro Arg Gly Gly Tyr Pro Pro Glu Thr Gly Gly
 195 200 205
 Tyr Pro Pro Gln Pro Gly Tyr Pro Arg Pro Arg His Pro Asp Gln Gly
 210 215 220
 Asp Tyr Pro Glu Gln Ile Gly Tyr Pro Asp Gln Gly Tyr Pro Glu
 225 230 235 240
 Gln Arg Gly Tyr Pro Glu Gln Arg Gly Tyr Pro Asp Gln Arg Gly Tyr
 245 250 255
 Gln Asp Gln Gly Arg Gly Tyr Pro Asp Gln Gly Gln Gly Tyr Pro
 260 265 270
 Pro Pro Tyr Glu Gln Arg Pro Pro Val Ser Pro Gly Pro Ala Ala Gly
 275 280 285
 Tyr Gly Ala Pro Gly Tyr Asp Gln Gly Tyr Arg Gln Ser Gly Gly Tyr
 290 295 300
 Gly Pro Ser Pro Gly Gly Gln Pro Gly Tyr Gly Tyr Gly Glu
 305 310 315 320
 Tyr Gly Arg Gly Pro Ala Arg His Glu Glu Gly Ser Tyr Val Pro Ser
 325 330 335
 Gly Pro Pro Gly Pro Pro Glu Gln Arg Pro Ala Tyr Pro Asp Gln Gly
 340 345 350
 Gly Tyr Asp Gln Gly Tyr Gln Gln Gly Ala Thr Thr Tyr Gly Arg Gln
 355 360 365
 Asp Tyr Gly Gly Gly Ala Asp Tyr Thr Arg Tyr Thr Glu Ser Pro Arg
 370 375 380
 Val Pro Gly Tyr Ala Pro Gln Gly Gly Gly Tyr Ala Glu Pro Ala Gly
 385 390 395 400
 Arg Asp Tyr Asp Tyr Gly Gln Ser Gly Ala Pro Asp Tyr Gly Gln Pro
 405 410 415
 Ala Pro Gly Gly Tyr Ser Gly Tyr Gly Gln Gly Gly Tyr Gly Ser Ala
 420 425 430
 Gly Thr Ser Val Thr Leu Gln Leu Asp Asp Gly Ser Gly Arg Thr Tyr
 435 440 445
 Gln Leu Arg Glu Gly Ser Asn Ile Ile Gly Arg Gly Gln Asp Ala Gln
 450 455 460
 Phe Arg Leu Pro Asp Thr Gly Val Ser Arg Arg His Leu Glu Ile Arg
 465 470 475 480
 Trp Asp Gly Gln Val Ala Leu Leu Ala Asp Leu Asn Ser Thr Asn Gly
 485 490 495
 Thr Thr Val Asn Asn Ala Pro Val Gln Glu Trp Gln Leu Ala Asp Gly
 500 505 510
 Asp Val Ile Arg Leu Gly His Ser Glu Ile Ile Val Arg Met His
 515 520 525

<210> 157

<211> 771

<212> PRT

<213> Mycobacterium tuberculosis

<400> 157

Met	Pro	Thr	Gly	Leu	Gly	Tyr	Asp	Phe	Leu	Arg	Pro	Val	Glu	Asp	Ser
1				5					10					15	
Gly	Ile	Asn	Asp	Leu	Lys	His	Tyr	Tyr	Phe	Met	Ala	Asp	Leu	Ala	Asp
			20					25					30		
Gly	Gln	Pro	Leu	Gly	Arg	Ala	Asn	Leu	Tyr	Ser	Val	Cys	Phe	Asp	Leu
		35					40					45			
Ala	Thr	Thr	Asp	Arg	Lys	Leu	Thr	Pro	Ala	Trp	Arg	Thr	Thr	Ile	Lys
	50					55					60				
Arg	Trp	Phe	Pro	Gly	Phe	Met	Thr	Phe	Arg	Phe	Leu	Glu	Cys	Gly	Leu
65					70				75						80
Leu	Thr	Met	Val	Ser	Asn	Pro	Leu	Ala	Leu	Arg	Ser	Asp	Thr	Asp	Leu
				85					90					95	
Glu	Arg	Val	Leu	Pro	Val	Leu	Ala	Gly	Gln	Met	Asp	Gln	Leu	Ala	His
			100					105					110		
Asp	Asp	Gly	Ser	Asp	Phe	Leu	Met	Ile	Arg	Asp	Val	Asp	Pro	Glu	His
		115					120					125			
Tyr	Gln	Arg	Tyr	Leu	Asp	Ile	Leu	Arg	Pro	Leu	Gly	Phe	Arg	Pro	Ala
	130					135					140				
Leu	Gly	Phe	Ser	Arg	Val	Asp	Thr	Thr	Ile	Ser	Trp	Ser	Ser	Val	Glu
145					150				155						160
Glu	Ala	Leu	Gly	Cys	Leu	Ser	His	Lys	Arg	Arg	Leu	Pro	Leu	Lys	Thr
				165					170					175	
Ser	Leu	Glu	Phe	Arg	Glu	Arg	Phe	Gly	Ile	Glu	Val	Glu	Glu	Leu	Asp
			180					185					190		
Glu	Tyr	Ala	Glu	His	Ala	Pro	Val	Leu	Ala	Arg	Leu	Trp	Arg	Asn	Val
		195					200					205			
Lys	Thr	Glu	Ala	Lys	Asp	Tyr	Gln	Arg	Glu	Asp	Leu	Asn	Pro	Glu	Phe
	210					215					220				
Phe	Ala	Ala	Cys	Ser	Arg	His	Leu	His	Gly	Arg	Ser	Arg	Leu	Trp	Leu
225					230				235						240
Phe	Arg	Tyr	Gln	Gly	Thr	Pro	Ile	Ala	Phe	Phe	Leu	Asn	Val	Trp	Gly
				245					250					255	
Ala	Asp	Glu	Asn	Tyr	Ile	Leu	Leu	Glu	Trp	Gly	Ile	Asp	Arg	Asp	Phe
			260					265				270			
Glu	His	Tyr	Arg	Lys	Ala	Asn	Leu	Tyr	Arg	Ala	Ala	Leu	Met	Leu	Ser
		275					280					285			
Leu	Lys	Asp	Ala	Ile	Ser	Arg	Asp	Lys	Arg	Arg	Met	Glu	Met	Gly	Ile
	290					295					300				
Thr	Asn	Tyr	Phe	Thr	Lys	Leu	Arg	Ile	Pro	Gly	Ala	Arg	Val	Ile	Pro
305					310					315					320
Thr	Ile	Tyr	Phe	Leu	Arg	His	Ser	Thr	Asp	Pro	Val	His	Thr	Ala	Thr
				325					330					335	
Leu	Ala	Arg	Met	Met	Met	His	Asn	Ile	Gln	Arg	Pro	Thr	Leu	Pro	Asp
			340					345				350			
Asp	Met	Ser	Glu	Glu	Phe	Cys	Arg	Trp	Glu	Glu	Arg	Ile	Arg	Leu	Asp
		355					360					365			
Gln	Asp	Gly	Leu	Pro	Glu	His	Asp	Ile	Phe	Arg	Lys	Ile	Asp	Arg	Gln
	370					375					380				
His	Lys	Tyr	Thr	Gly	Leu	Lys	Leu	Gly	Gly	Val	Tyr	Gly	Phe	Tyr	Pro
385					390					395					400
Arg	Phe	Thr	Gly	Pro	Gln	Arg	Ser	Thr	Val	Lys	Ala	Ala	Glu	Leu	Gly
				405					410				415		
Glu	Ile	Val	Leu	Leu	Gly	Thr	Asn	Ser	Tyr	Leu	Gly	Leu	Ala	Thr	His

420 425 430
 Pro Glu Val Val Glu Ala Ser Ala Glu Ala Thr Arg Arg Tyr Gly Thr
 435 440 445
 Gly Cys Ser Gly Ser Pro Leu Asn Gly Thr Leu Asp Leu His Val
 450 455 460
 Ser Leu Glu Gln Glu Leu Ala Cys Phe Leu Gly Lys Pro Ala Ala Val
 465 470 475 480
 Leu Cys Ser Thr Gly Tyr Gln Ser Asn Leu Ala Ala Ile Ser Ala Leu
 485 490 495
 Cys Glu Ser Gly Asp Met Ile Ile Gln Asp Ala Leu Asn His Arg Ser
 500 505 510
 Leu Phe Asp Ala Ala Arg Leu Ser Gly Ala Asp Phe Thr Leu Tyr Arg
 515 520 525
 His Asn Asp Met Asp His Leu Ala Arg Val Leu Arg Arg Thr Glu Gly
 530 535 540
 Arg Arg Arg Ile Ile Val Val Asp Ala Val Phe Ser Met Glu Gly Thr
 545 550 555 560
 Val Ala Asp Leu Ala Thr Ile Ala Glu Leu Ala Asp Arg His Gly Cys
 565 570 575
 Arg Val Tyr Val Asp Glu Ser His Ala Leu Gly Val Leu Gly Pro Asp
 580 585 590
 Gly Arg Gly Ala Ser Ala Ala Leu Gly Val Leu Ala Arg Met Asp Val
 595 600 605
 Val Met Gly Thr Phe Ser Lys Ser Phe Ala Ser Val Gly Gly Phe Ile
 610 615 620
 Ala Gly Asp Arg Pro Val Val Asp Tyr Ile Arg His Asn Gly Ser Gly
 625 630 635 640
 His Val Phe Ser Ala Ser Leu Pro Pro Ala Ala Ala Ala Thr His
 645 650 655
 Ala Ala Leu Arg Val Ser Arg Arg Glu Pro Asp Arg Arg Ala Arg Val
 660 665 670
 Leu Ala Ala Ala Glu Tyr Met Ala Thr Gly Leu Ala Arg Gln Gly Tyr
 675 680 685
 Gln Ala Glu Tyr His Gly Thr Ala Ile Val Pro Val Ile Leu Gly Asn
 690 695 700
 Pro Thr Val Ala His Ala Gly Tyr Leu Arg Leu Met Arg Ser Gly Val
 705 710 715 720
 Tyr Val Asn Pro Val Ala Pro Pro Ala Val Pro Glu Glu Arg Ser Gly
 725 730 735
 Phe Arg Thr Ser Tyr Leu Ala Asp His Arg Gln Ser Asp Leu Asp Arg
 740 745 750
 Ala Leu His Val Phe Ala Gly Leu Ala Glu Asp Leu Thr Pro Gln Gly
 755 760 765
 Ala Ala Leu
 770

<210> 158

<211> 678

<212> PRT

<213> Mycobacterium tuberculosis

<400> 158

Val Val Ile Leu Leu Pro Met Val Thr Phe Thr Met Ala Tyr Leu Ile
 1 5 10 15
 Val Asp Val Pro Lys Pro Gly Asp Ile Arg Thr Asn Gln Val Ser Thr
 20 25 30
 Ile Leu Ala Ser Asp Gly Ser Glu Ile Ala Lys Ile Val Pro Pro Glu

	35				40				45						
Gly	Asn	Arg	Val	Asp	Val	Asn	Leu	Ser	Gln	Val	Pro	Met	His	Val	Arg
	50					55					60				
Gln	Ala	Val	Ile	Ala	Ala	Glu	Asp	Arg	Asn	Phe	Tyr	Ser	Asn	Pro	Gly
65					70					75					80
Phe	Ser	Phe	Thr	Gly	Phe	Ala	Arg	Ala	Val	Lys	Asn	Asn	Leu	Phe	Gly
				85					90					95	
Gly	Asp	Leu	Gln	Gly	Gly	Ser	Thr	Ile	Thr	Gln	Gln	Tyr	Val	Lys	Asn
			100						105				110		
Ala	Leu	Val	Gly	Ser	Ala	Gln	His	Gly	Trp	Ser	Gly	Leu	Met	Arg	Lys
		115					120					125			
Ala	Lys	Glu	Leu	Val	Ile	Ala	Thr	Lys	Met	Ser	Gly	Glu	Trp	Ser	Lys
	130					135					140				
Asp	Asp	Val	Leu	Gln	Ala	Tyr	Leu	Asn	Ile	Ile	Tyr	Phe	Gly	Arg	Gly
145					150					155					160
Ala	Tyr	Gly	Ile	Ser	Ala	Ala	Ser	Lys	Ala	Tyr	Phe	Asp	Lys	Pro	Val
				165					170					175	
Glu	Gln	Leu	Thr	Val	Ala	Glu	Gly	Ala	Leu	Leu	Ala	Ala	Leu	Ile	Arg
			180					185					190		
Arg	Pro	Ser	Thr	Leu	Asp	Pro	Ala	Val	Asp	Pro	Glu	Gly	Ala	His	Ala
	195						200					205			
Arg	Trp	Asn	Trp	Val	Leu	Asp	Gly	Met	Val	Glu	Thr	Lys	Ala	Leu	Ser
	210					215					220				
Pro	Asn	Asp	Arg	Ala	Ala	Gln	Val	Phe	Pro	Glu	Thr	Val	Pro	Pro	Asp
225					230					235					240
Leu	Ala	Arg	Ala	Glu	Asn	Gln	Thr	Lys	Gly	Pro	Asn	Gly	Leu	Ile	Glu
				245					250					255	
Arg	Gln	Val	Thr	Arg	Glu	Leu	Leu	Glu	Leu	Phe	Asn	Ile	Asp	Glu	Gln
			260					265					270		
Thr	Leu	Asn	Thr	Gln	Gly	Leu	Val	Val	Thr	Thr	Thr	Ile	Asp	Pro	Gln
	275						280					285			
Ala	Gln	Arg	Ala	Ala	Glu	Lys	Ala	Val	Ala	Lys	Tyr	Leu	Asp	Gly	Gln
	290					295					300				
Asp	Pro	Asp	Met	Arg	Ala	Ala	Val	Val	Ser	Ile	Asp	Pro	His	Asn	Gly
305					310					315					320
Ala	Val	Arg	Ala	Tyr	Tyr	Gly	Gly	Asp	Asn	Ala	Asn	Gly	Phe	Asp	Phe
				325					330					335	
Ala	Gln	Ala	Gly	Leu	Gln	Thr	Gly	Ser	Ser	Phe	Lys	Val	Phe	Ala	Leu
			340					345					350		
Val	Ala	Ala	Leu	Glu	Gln	Gly	Ile	Gly	Leu	Gly	Tyr	Gln	Val	Asp	Ser
	355					360						365			
Ser	Pro	Leu	Thr	Val	Asp	Gly	Ile	Lys	Ile	Thr	Asn	Val	Glu	Gly	Glu
	370					375					380				
Gly	Cys	Gly	Thr	Cys	Asn	Ile	Ala	Glu	Ala	Leu	Lys	Met	Ser	Leu	Asn
385					390		</								

Thr Ala Asp Asn Thr Gly Asp Gln Arg Ile Pro Lys Ala Val Ala Asp
 500 505 510
 Asn Val Thr Ala Ala Met Glu Pro Ile Ala Gly Tyr Ser Arg Gly His
 515 520 525
 Asn Leu Ala Gly Gly Arg Asp Ser Ala Ala Lys Thr Gly Thr Thr Gln
 530 535 540
 Phe Gly Asp Thr Thr Ala Asn Lys Asp Ala Trp Met Val Gly Tyr Thr
 545 550 555 560
 Pro Ser Leu Ser Thr Ala Val Trp Val Gly Thr Val Lys Gly Asp Glu
 565 570 575
 Pro Leu Val Thr Ala Ser Gly Ala Ala Ile Tyr Gly Ser Gly Leu Pro
 580 585 590
 Ser Asp Ile Trp Lys Ala Thr Met Asp Gly Ala Leu Lys Gly Thr Ser
 595 600 605
 Asn Glu Thr Phe Pro Lys Pro Thr Glu Val Gly Gly Tyr Ala Gly Val
 610 615 620
 Pro Pro Pro Pro Pro Pro Glu Val Pro Pro Ser Glu Thr Val Ile
 625 630 635 640
 Gln Pro Thr Val Glu Ile Ala Pro Gly Ile Thr Ile Pro Ile Gly Pro
 645 650 655
 Pro Thr Thr Ile Thr Leu Ala Pro Pro Pro Pro Ala Pro Pro Ala Ala
 660 665 670
 Thr Pro Thr Pro Pro Pro
 675

<210> 159

<211> 560

<212> PRT

<213> Mycobacterium tuberculosis

<400> 159

Val Thr Gly Ala Leu Ser Gln Ser Ser Asn Ile Ser Pro Leu Pro Leu
 1 5 10 15
 Ala Ala Asp Leu Arg Ser Ala Asp Asn Arg Asp Cys Pro Ser Arg Thr
 20 25 30
 Asp Val Leu Gly Ala Ala Leu Ala Asn Val Val Gly Gly Pro Val Gly
 35 40 45
 Arg His Ala Leu Ile Gly Arg Thr Arg Leu Met Thr Pro Leu Arg Val
 50 55 60
 Met Phe Ala Ile Ala Leu Val Phe Leu Ala Leu Gly Trp Ser Thr Lys
 65 70 75 80
 Ala Ala Cys Leu Gln Ser Thr Gly Thr Gly Pro Gly Asp Gln Arg Val
 85 90 95
 Ala Asn Trp Asp Asn Gln Arg Ala Tyr Tyr Gln Leu Cys Tyr Ser Asp
 100 105 110
 Thr Val Pro Leu Tyr Gly Ala Glu Leu Leu Ser Gln Gly Lys Phe Pro
 115 120 125
 Tyr Lys Ser Ser Trp Ile Glu Thr Asp Ser Asn Gly Thr Pro Gln Leu
 130 135 140
 Arg Tyr Asp Gly Gln Ile Ala Val Arg Tyr Met Glu Tyr Pro Val Leu
 145 150 155 160
 Thr Gly Ile Tyr Gln Tyr Leu Ser Met Ala Ile Ala Lys Thr Tyr Thr
 165 170 175
 Ala Leu Ser Lys Val Ala Pro Leu Pro Val Val Ala Glu Val Val Met
 180 185 190
 Phe Phe Asn Val Ala Ala Phe Gly Leu Ala Leu Ala Trp Leu Thr Thr
 195 200 205

Val Trp Ala Thr Ser Gly Leu Ala Gly Arg Arg Ile Trp Asp Ala Ala
 210 215 220
 Leu Val Ala Ala Ser Pro Leu Val Ile Phe Gln Ile Phe Thr Asn Phe
 225 230 235 240
 Asp Ala Leu Ala Thr Gly Leu Ala Thr Ser Gly Leu Leu Ala Trp Ala
 245 250 255
 Arg Arg Arg Pro Val Leu Ala Gly Val Leu Ile Gly Leu Gly Ser Ala
 260 265 270
 Ala Lys Leu Tyr Pro Leu Leu Phe Leu Tyr Pro Leu Leu Leu Gly
 275 280 285
 Ile Arg Ala Gly Arg Leu Asn Ala Leu Ala Arg Thr Met Ala Ala Ala
 290 295 300
 Ala Ala Thr Trp Leu Leu Val Asn Leu Pro Val Met Leu Leu Phe Pro
 305 310 315 320
 Arg Gly Trp Ser Glu Phe Phe Arg Leu Asn Thr Arg Arg Gly Asp Asp
 325 330 335
 Met Asp Ser Leu Tyr Asn Val Val Lys Ser Phe Thr Gly Trp Arg Gly
 340 345 350
 Phe Asp Pro Thr Leu Gly Phe Trp Glu Pro Pro Leu Val Leu Asn Thr
 355 360 365
 Val Val Thr Leu Leu Phe Val Leu Cys Cys Ala Ala Ile Ala Tyr Ile
 370 375 380
 Ala Leu Thr Ala Pro His Arg Pro Arg Val Ala Gln Leu Thr Phe Leu
 385 390 395 400
 Thr Val Ala Ser Phe Leu Leu Val Asn Lys Val Trp Ser Pro Gln Phe
 405 410 415
 Ser Leu Trp Leu Val Pro Leu Ala Val Leu Ala Leu Pro His Arg Arg
 420 425 430
 Ile Leu Leu Ala Trp Met Thr Ile Asp Ala Leu Val Trp Val Pro Arg
 435 440 445
 Met Tyr Tyr Leu Tyr Gly Asn Pro Ser Arg Ser Leu Pro Glu Gln Trp
 450 455 460
 Phe Thr Thr Thr Val Leu Leu Arg Asp Ile Ala Val Met Val Leu Cys
 465 470 475 480
 Gly Leu Val Val Trp Gln Ile Tyr Arg Pro Gly Arg Asp Leu Val Arg
 485 490 495
 Thr Gly Gly Pro Gly Ala Leu Pro Ala Cys Gly Gly Val Asp Asp Pro
 500 505 510
 Val Gly Gly Val Phe Ala Asn Ala Ala Asp Ala Pro Pro Gly Arg Leu
 515 520 525
 Pro Ser Trp Leu Arg Pro Arg Leu Gly Asp Glu His Ala Arg Glu Arg
 530 535 540
 Thr Pro Asp Ala Gly Arg Asp Arg Thr Phe Ser Gly Gln His Arg Ala
 545 550 555 560

<210> 160

<211> 398

<212> PRT

<213> Mycobacterium tuberculosis

<400> 160

Met Arg Thr Pro Val Ile Leu Val Ala Gly Gln Asp His Thr Asp Glu
 1 5 10 15
 Val Thr Gly Ala Leu Leu Arg Arg Thr Gly Thr Val Val Val Glu His
 20 25 30
 Arg Phe Asp Gly His Val Val Arg Arg Met Thr Ala Thr Leu Ser Arg
 35 40 45

Gly Glu Leu Ile Thr Thr Glu Asp Ala Leu Glu Phe Ala His Gly Cys
 50 55 60
 Val Ser Cys Thr Ile Arg Asp Asp Leu Leu Val Leu Leu Arg Arg Leu
 65 70 75 80
 His Arg Arg Asp Asn Val Gly Arg Ile Val Val His Leu Ala Pro Trp
 85 90 95
 Leu Glu Pro Gln Pro Ile Cys Trp Ala Ile Asp His Val Arg Val Cys
 100 105 110
 Val Gly His Gly Tyr Pro Asp Gly Pro Ala Ala Leu Asp Val Arg Val
 115 120 125
 Ala Ala Val Val Thr Cys Val Asp Cys Val Arg Trp Leu Pro Gln Ser
 130 135 140
 Leu Gly Glu Asp Glu Leu Pro Asp Gly Arg Thr Val Ala Gln Val Thr
 145 150 155 160
 Val Gly Gln Ala Glu Phe Ala Asp Leu Leu Val Leu Thr His Pro Glu
 165 170 175
 Pro Val Ala Val Ala Val Leu Arg Arg Leu Ala Pro Arg Ala Arg Ile
 180 185 190
 Thr Gly Gly Val Asp Arg Val Glu Leu Ala Leu Ala His Leu Asp Asp
 195 200 205
 Asn Ser Arg Arg Gly Arg Thr Asp Thr Pro His Thr Pro Leu Leu Ala
 210 215 220
 Gly Leu Pro Pro Leu Ala Ala Asp Gly Glu Val Ala Ile Val Glu Phe
 225 230 235 240
 Ser Ala Arg Arg Pro Phe His Pro Gln Arg Leu His Ala Ala Val Asp
 245 250 255
 Leu Leu Leu Asp Gly Val Val Arg Thr Arg Gly Arg Leu Trp Leu Ala
 260 265 270
 Asn Arg Pro Asp Gln Val Met Trp Leu Glu Ser Ala Gly Gly Gly Leu
 275 280 285
 Arg Val Ala Ser Ala Gly Lys Trp Leu Ala Ala Met Ala Ala Ser Glu
 290 295 300
 Val Ala Tyr Val Asp Leu Glu Arg Arg Leu Phe Ala Asp Leu Met Trp
 305 310 315 320
 Val Tyr Pro Phe Gly Asp Arg His Thr Ala Met Thr Val Leu Val Cys
 325 330 335
 Gly Ala Asp Pro Thr Asp Ile Val Asn Ala Leu Asn Ala Ala Leu Leu
 340 345 350
 Ser Asp Asp Glu Met Ala Ser Pro Gln Arg Trp Gln Ser Tyr Val Asp
 355 360 365
 Pro Phe Gly Asp Trp His Asp Asp Pro Cys His Glu Met Pro Asp Ala
 370 375 380
 Ala Gly Glu Phe Ser Ala His Arg Asn Ser Gly Glu Ser Arg
 385 390 395

<210> 161

<211> 355

<212> PRT

<213> Mycobacterium tuberculosis

<400> 161

Met Ser Asn Ser Arg Arg Arg Ser Leu Arg Trp Ser Trp Leu Leu Ser
 1 5 10 15
 Val Leu Ala Ala Val Gly Leu Gly Leu Ala Thr Ala Pro Ala Gln Ala
 20 25 30
 Ala Pro Pro Ala Leu Ser Gln Asp Arg Phe Ala Asp Phe Pro Ala Leu
 35 40 45

```

Pro Leu Asp Pro Ser Ala Met Val Ala Gln Val Gly Pro Gln Val Val
 50          55          60
Asn Ile Asn Thr Lys Leu Gly Tyr Asn Asn Ala Val Gly Ala Gly Thr
65          70          75          80
Gly Ile Val Ile Asp Pro Asn Gly Val Val Leu Thr Asn Asn His Val
          85          90          95
Ile Ala Gly Ala Thr Asp Ile Asn Ala Phe Ser Val Gly Ser Gly Gln
          100          105          110
Thr Tyr Gly Val Asp Val Val Gly Tyr Asp Arg Thr Gln Asp Val Ala
          115          120          125
Val Leu Gln Leu Arg Gly Ala Gly Gly Leu Pro Ser Ala Ala Ile Gly
          130          135          140
Gly Gly Val Ala Val Gly Glu Pro Val Val Ala Met Gly Asn Ser Gly
145          150          155          160
Gly Gln Gly Gly Thr Pro Arg Ala Val Pro Gly Arg Val Val Ala Leu
          165          170          175
Gly Gln Thr Val Gln Ala Ser Asp Ser Leu Thr Gly Ala Glu Glu Thr
          180          185          190
Leu Asn Gly Leu Ile Gln Phe Asp Ala Ala Ile Gln Pro Gly Asp Ser
          195          200          205
Gly Gly Pro Val Val Asn Gly Leu Gly Gln Val Val Gly Met Asn Thr
          210          215          220
Ala Ala Ser Asp Asn Phe Gln Leu Ser Gln Gly Gly Gln Gly Phe Ala
225          230          235          240
Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile Arg Ser Gly
          245          250          255
Gly Gly Ser Pro Thr Val His Ile Gly Pro Thr Ala Phe Leu Gly Leu
          260          265          270
Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val Gln Arg Val Val
          275          280          285
Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr Gly Asp Val Ile
          290          295          300
Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr Ala Met Ala Asp
305          310          315          320
Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser Val Thr Trp Gln
          325          330          335
Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr Leu Ala Glu Gly
          340          345          350
Pro Pro Ala
          355

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<210> 162

<211> 625

<212> PRT

<213> Mycobacterium tuberculosis

<400> 162

```

Met Ala Arg Ala Val Gly Ile Asp Leu Gly Thr Thr Asn Ser Val Val
 1          5          10          15
Ser Val Leu Glu Gly Gly Asp Pro Val Val Val Ala Asn Ser Glu Gly
          20          25          30
Ser Arg Thr Thr Pro Ser Ile Val Ala Phe Ala Arg Asn Gly Glu Val
          35          40          45
Leu Val Gly Gln Pro Ala Lys Asn Gln Ala Val Thr Asn Val Asp Arg
          50          55          60
Thr Val Arg Ser Val Lys Arg His Met Gly Ser Asp Trp Ser Ile Glu
65          70          75          80

```

Ile	Asp	Gly	Lys	Lys	Tyr	Thr	Ala	Pro	Glu	Ile	Ser	Ala	Arg	Ile	Leu	85	90	95
Met	Lys	Leu	Lys	Arg	Asp	Ala	Glu	Ala	Tyr	Leu	Gly	Glu	Asp	Ile	Thr	100	105	110
Asp	Ala	Val	Ile	Thr	Thr	Pro	Ala	Tyr	Phe	Asn	Asp	Ala	Gln	Arg	Gln	115	120	125
Ala	Thr	Lys	Asp	Ala	Gly	Gln	Ile	Ala	Gly	Leu	Asn	Val	Leu	Arg	Ile	130	135	140
Val	Asn	Glu	Pro	Thr	Ala	Ala	Ala	Leu	Ala	Tyr	Gly	Leu	Asp	Lys	Gly	145	150	155
Glu	Lys	Glu	Gln	Arg	Ile	Leu	Val	Phe	Asp	Leu	Gly	Gly	Gly	Thr	Phe	165	170	175
Asp	Val	Ser	Leu	Leu	Glu	Ile	Gly	Glu	Gly	Val	Val	Glu	Val	Arg	Ala	180	185	190
Thr	Ser	Gly	Asp	Asn	His	Leu	Gly	Gly	Asp	Asp	Trp	Asp	Gln	Arg	Val	195	200	205
Val	Asp	Trp	Leu	Val	Asp	Lys	Phe	Lys	Gly	Thr	Ser	Gly	Ile	Asp	Leu	210	215	220
Thr	Lys	Asp	Lys	Met	Ala	Met	Gln	Arg	Leu	Arg	Glu	Ala	Ala	Glu	Lys	225	230	235
Ala	Lys	Ile	Glu	Leu	Ser	Ser	Ser	Gln	Ser	Thr	Ser	Ile	Asn	Leu	Pro	245	250	255
Tyr	Ile	Thr	Val	Asp	Ala	Asp	Lys	Asn	Pro	Leu	Phe	Leu	Asp	Glu	Gln	260	265	270
Leu	Thr	Arg	Ala	Glu	Phe	Gln	Arg	Ile	Thr	Gln	Asp	Leu	Leu	Asp	Arg	275	280	285
Thr	Arg	Lys	Pro	Phe	Gln	Ser	Val	Ile	Ala	Asp	Thr	Gly	Ile	Ser	Val	290	295	300
Ser	Glu	Ile	Asp	His	Val	Val	Leu	Val	Gly	Gly	Ser	Thr	Arg	Met	Pro	305	310	315
Ala	Val	Thr	Asp	Leu	Val	Lys	Glu	Leu	Thr	Gly	Gly	Lys	Glu	Pro	Asn	325	330	335
Lys	Gly	Val	Asn	Pro	Asp	Glu	Val	Val	Ala	Val	Gly	Ala	Ala	Leu	Gln	340	345	350
Ala	Gly	Val	Leu	Lys	Gly	Glu	Val	Lys	Asp	Val	Leu	Leu	Leu	Asp	Val	355	360	365
Thr	Pro	Leu	Ser	Leu	Gly	Ile	Glu	Thr	Lys	Gly	Gly	Val	Met	Thr	Arg	370	375	380
Leu	Ile	Glu	Arg	Asn	Thr	Thr	Ile	Pro	Thr	Lys	Arg	Ser	Glu	Thr	Phe	385	390	395
Thr	Thr	Ala	Asp	Asp	Asn	Gln	Pro	Ser	Val	Gln	Ile	Gln	Val	Tyr	Gln	405	410	415
Gly	Glu	Arg	Glu	Ile	Ala	Ala	His	Asn	Lys	Leu	Leu	Gly	Ser	Phe	Glu	420	425	430
Leu	Thr	Gly	Ile	Pro	Pro	Ala	Pro	Arg	Gly	Ile	Pro	Gln	Ile	Glu	Val	435	440	445
Thr	Phe	Asp	Ile	Asp	Ala	Asn	Gly	Ile	Val	His	Val	Thr	Ala	Lys	Asp	450	455	460
Lys	Gly	Thr	Gly	Lys	Glu	Asn	Thr	Ile	Arg	Ile	Gln	Glu	Gly	Ser	Gly	465	470	475
Leu	Ser	Lys	Glu	Asp	Ile	Asp	Arg	Met	Ile	Lys	Asp	Ala	Glu	Ala	His	485	490	495
Ala	Glu	Glu	Asp	Arg	Lys	Arg	Arg	Glu	Glu	Ala	Asp	Val	Arg	Asn	Gln	500	505	510
Ala	Glu	Thr	Leu	Val	Tyr	Gln	Thr	Glu	Lys	Phe	Val	Lys	Glu	Gln	Arg	515	520	525
Glu	Ala	Glu	Gly	Gly	Ser	Lys	Val	Pro	Glu	Asp	Thr	Leu	Asn	Lys	Val			

530		535		540											
Asp	Ala	Ala	Val	Ala	Glu	Ala	Lys	Ala	Ala	Leu	Gly	Gly	Ser	Asp	Ile
545		550		555		560									
Ser	Ala	Ile	Lys	Ser	Ala	Met	Glu	Lys	Leu	Gly	Gln	Glu	Ser	Gln	Ala
		565		570		575									
Leu	Gly	Gln	Ala	Ile	Tyr	Glu	Ala	Ala	Gln	Ala	Ala	Ser	Gln	Ala	Thr
		580		585		590									
Gly	Ala	Ala	His	Pro	Gly	Gly	Glu	Pro	Gly	Gly	Ala	His	Pro	Gly	Ser
		595		600		605									
Ala	Asp	Asp	Val	Val	Asp	Ala	Glu	Val	Val	Asp	Asp	Gly	Arg	Glu	Ala
		610		615		620									

Lys
625

<210> 163
<211> 235
<212> PRT
<213> Mycobacterium tuberculosis

<400> 163
Val Thr Asp Gly Asn Gln Lys Pro Asp Gly Asn Ser Gly Glu Gln Val
1 5 10 15
Thr Val Thr Asp Lys Arg Arg Ile Asp Pro Glu Thr Gly Glu Val Arg
20 25 30
His Val Pro Pro Gly Asp Met Pro Gly Gly Thr Ala Ala Asp Ala
35 40 45
Ala His Thr Glu Asp Lys Val Ala Glu Leu Thr Ala Asp Leu Gln Arg
50 55 60
Val Gln Ala Asp Phe Ala Asn Tyr Arg Lys Arg Ala Leu Arg Asp Gln
65 70 75 80
Gln Ala Ala Ala Asp Arg Ala Lys Ala Ser Val Val Ser Gln Leu Leu
85 90 95
Gly Val Leu Asp Asp Leu Glu Arg Ala Arg Lys His Gly Asp Leu Glu
100 105 110
Ser Gly Pro Leu Lys Ser Val Ala Asp Lys Leu Asp Ser Ala Leu Thr
115 120 125
Gly Leu Gly Leu Val Ala Phe Gly Ala Glu Gly Glu Asp Phe Asp Pro
130 135 140
Val Leu His Glu Ala Val Gln His Glu Gly Asp Gly Gly Gln Gly Ser
145 150 155 160
Lys Pro Val Ile Gly Thr Val Met Arg Gln Gly Tyr Gln Leu Gly Glu
165 170 175
Gln Val Leu Arg His Ala Leu Val Gly Val Val Asp Thr Val Val Val
180 185 190
Asp Ala Ala Glu Leu Glu Ser Val Asp Asp Gly Thr Ala Val Ala Asp
195 200 205
Thr Ala Glu Asn Asp Gln Ala Asp Gln Gly Asn Ser Ala Asp Thr Ser
210 215 220
Gly Glu Gln Ala Glu Ser Glu Pro Ser Gly Ser
225 230 235

<210> 164
<211> 395
<212> PRT
<213> Mycobacterium tuberculosis

<400> 164

```

Met Ala Gln Arg Glu Trp Val Glu Lys Asp Phe Tyr Gln Glu Leu Gly
 1          5          10          15
Val Ser Ser Asp Ala Ser Pro Glu Glu Ile Lys Arg Ala Tyr Arg Lys
          20          25          30
Leu Ala Arg Asp Leu His Pro Asp Ala Asn Pro Gly Asn Pro Ala Ala
          35          40          45
Gly Glu Arg Phe Lys Ala Val Ser Glu Ala His Asn Val Leu Ser Asp
          50          55          60
Pro Ala Lys Arg Lys Glu Tyr Asp Glu Thr Arg Arg Leu Phe Ala Gly
65          70          75          80
Gly Gly Phe Gly Gly Arg Arg Phe Asp Ser Gly Phe Gly Gly Gly Phe
          85          90          95
Gly Gly Phe Gly Val Gly Gly Asp Gly Ala Glu Phe Asn Leu Asn Asp
          100          105          110
Leu Phe Asp Ala Ala Ser Arg Thr Gly Gly Thr Thr Ile Gly Asp Leu
          115          120          125
Phe Gly Gly Leu Phe Gly Arg Gly Gly Ser Ala Arg Pro Ser Arg Pro
          130          135          140
Arg Arg Gly Asn Asp Leu Glu Thr Glu Thr Glu Leu Asp Phe Val Glu
145          150          155          160
Ala Ala Lys Gly Val Ala Met Pro Leu Arg Leu Thr Ser Pro Ala Pro
          165          170          175
Cys Thr Asn Cys His Gly Ser Gly Ala Arg Pro Gly Thr Ser Pro Lys
          180          185          190
Val Cys Pro Thr Cys Asn Gly Ser Gly Val Ile Asn Arg Asn Gln Gly
          195          200          205
Ala Phe Gly Phe Ser Glu Pro Cys Thr Asp Cys Arg Gly Ser Gly Ser
          210          215          220
Ile Ile Glu His Pro Cys Glu Glu Cys Lys Gly Thr Gly Val Thr Thr
225          230          235          240
Arg Thr Arg Thr Ile Asn Val Arg Ile Pro Pro Gly Val Glu Asp Gly
          245          250          255
Gln Arg Ile Arg Leu Ala Gly Gln Gly Glu Ala Gly Leu Arg Gly Ala
          260          265          270
Pro Ser Gly Asp Leu Tyr Val Thr Val His Val Arg Pro Asp Lys Ile
          275          280          285
Phe Gly Arg Asp Gly Asp Asp Leu Thr Val Thr Val Pro Val Ser Phe
          290          295          300
Thr Glu Leu Ala Leu Gly Ser Thr Leu Ser Val Pro Thr Leu Asp Gly
305          310          315          320
Thr Val Gly Val Arg Val Pro Lys Gly Thr Ala Asp Gly Arg Ile Leu
          325          330          335
Arg Val Arg Gly Arg Gly Val Pro Lys Arg Ser Gly Gly Ser Gly Asp
          340          345          350
Leu Leu Val Thr Val Lys Val Ala Val Pro Pro Asn Leu Ala Gly Ala
          355          360          365
Ala Gln Glu Ala Leu Glu Ala Tyr Ala Ala Ala Glu Arg Ser Ser Gly
          370          375          380
Phe Asn Pro Arg Ala Gly Trp Ala Gly Asn Arg
385          390          395

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<210> 165

<211> 344

<212> PRT

<213> Mycobacterium tuberculosis

<400> 165

```

Met Pro Ile Ala Thr Pro Glu Val Tyr Ala Glu Met Leu Gly Gln Ala
 1           5           10           15
Lys Gln Asn Ser Tyr Ala Phe Pro Ala Ile Asn Cys Thr Ser Ser Glu
          20           25           30
Thr Val Asn Ala Ala Ile Lys Gly Phe Ala Asp Ala Gly Ser Asp Gly
          35           40           45
Ile Ile Gln Phe Ser Thr Gly Gly Ala Glu Phe Gly Ser Gly Leu Gly
          50           55           60
Val Lys Asp Met Val Thr Gly Ala Val Ala Leu Ala Glu Phe Thr His
65          70          75          80
Val Ile Ala Ala Lys Tyr Pro Val Asn Val Ala Leu His Thr Asp His
          85          90          95
Cys Pro Lys Asp Lys Leu Asp Ser Tyr Val Arg Pro Leu Leu Ala Ile
          100          105          110
Ser Ala Gln Arg Val Ser Lys Gly Gly Asn Pro Leu Phe Gln Ser His
          115          120          125
Met Trp Asp Gly Ser Ala Val Pro Ile Asp Glu Asn Leu Ala Ile Ala
130          135          140
Gln Glu Leu Leu Lys Ala Ala Ala Ala Ala Lys Ile Ile Leu Glu Ile
145          150          155          160
Glu Ile Gly Val Val Gly Gly Glu Glu Asp Gly Val Ala Asn Glu Ile
          165          170          175
Asn Glu Lys Leu Tyr Thr Ser Pro Glu Asp Phe Glu Lys Thr Ile Glu
          180          185          190
Ala Leu Gly Ala Gly Glu His Gly Lys Tyr Leu Leu Ala Ala Thr Phe
195          200          205
Gly Asn Val His Gly Val Tyr Lys Pro Gly Asn Val Lys Leu Arg Pro
210          215          220
Asp Ile Leu Ala Gln Gly Gln Gln Val Ala Ala Ala Lys Leu Gly Leu
225          230          235          240
Pro Ala Asp Ala Lys Pro Phe Asp Phe Val Phe His Gly Gly Ser Gly
          245          250          255
Ser Leu Lys Ser Glu Ile Glu Glu Ala Leu Arg Tyr Gly Val Val Lys
260          265          270
Met Asn Val Asp Thr Asp Thr Gln Tyr Ala Phe Thr Arg Pro Ile Ala
275          280          285
Gly His Met Phe Thr Asn Tyr Asp Gly Val Leu Lys Val Asp Gly Glu
290          295          300
Val Gly Val Lys Lys Val Tyr Asp Pro Arg Ser Tyr Leu Lys Lys Ala
305          310          315          320
Glu Ala Ser Met Ser Gln Arg Val Val Gln Ala Cys Asn Asp Leu His
          325          330          335
Cys Ala Gly Lys Ser Leu Thr His
          340

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<210> 166

<211> 1402

<212> PRT

<213> Mycobacterium tuberculosis

<400> 166

```

Met Thr Asp Gly Ser Val Thr Ala Asp Lys Leu Gln Lys Trp Phe Arg
 1           5           10           15
Glu Tyr Leu Ser Thr His Ile Glu Cys His Pro Asn Glu Val Ser Leu
          20           25           30
Asp Val Pro Ile Arg Asp Leu Gly Leu Lys Ser Ile Asp Val Leu Ala
          35           40           45

```

Ile	Pro	Gly	Asp	Leu	Gly	Asp	Arg	Phe	Gly	Phe	Cys	Ile	Pro	Asp	Leu	50	55	60
Ala	Val	Trp	Asp	Asn	Pro	Ser	Ala	Asn	Asp	Leu	Ile	Asp	Ser	Leu	Leu	65	70	75
Asn	Gln	Arg	Ser	Ala	Asp	Ser	Leu	Arg	Glu	Ser	His	Gly	His	Ala	Asp	85	90	95
Arg	Asn	Thr	Gln	Gly	Arg	Gly	Ser	Ile	Asn	Glu	Pro	Val	Ala	Val	Ile	100	105	110
Gly	Val	Gly	Cys	Arg	Phe	Pro	Gly	Asp	Ile	Asp	Gly	Pro	Glu	Arg	Leu	115	120	125
Trp	Asp	Phe	Leu	Thr	Glu	Lys	Lys	Cys	Ala	Ile	Thr	Ala	Tyr	Pro	Asp	130	135	140
Arg	Gly	Phe	Thr	Asn	Ala	Gly	Thr	Phe	Ala	Glu	Ser	Gly	Gly	Phe	Leu	145	150	155
Lys	Asp	Val	Ala	Gly	Phe	Asp	Asn	Arg	Phe	Phe	Asp	Ile	Pro	Pro	Asp	165	170	175
Glu	Ala	Leu	Arg	Met	Asp	Pro	Gln	Gln	Arg	Leu	Leu	Leu	Glu	Val	Ser	180	185	190
Trp	Glu	Ala	Leu	Glu	His	Ala	Gly	Ile	Ile	Pro	Glu	Ser	Leu	Arg	Leu	195	200	205
Ser	Arg	Thr	Gly	Val	Phe	Val	Gly	Val	Ser	Ser	Thr	Asp	Tyr	Val	Arg	210	215	220
Leu	Val	Ser	Ala	Ser	Ala	Gln	Gln	Lys	Ser	Thr	Ile	Trp	Asp	Asn	Thr	225	230	235
Gly	Gly	Ser	Ser	Ser	Ile	Ile	Ala	Asn	Arg	Ile	Ser	Tyr	Phe	Leu	Asp	245	250	255
Ile	Gln	Gly	Pro	Ser	Ile	Val	Ile	Asp	Thr	Ala	Cys	Ser	Ser	Ser	Leu	260	265	270
Val	Ala	Val	His	Leu	Ala	Cys	Arg	Ser	Leu	Ser	Thr	Trp	Asp	Cys	Asp	275	280	285
Ile	Ala	Leu	Val	Gly	Gly	Thr	Asn	Val	Leu	Ile	Ser	Pro	Glu	Pro	Trp	290	295	300
Gly	Gly	Phe	Arg	Glu	Ala	Gly	Ile	Leu	Ser	Gln	Thr	Gly	Cys	Cys	His	305	310	315
Ala	Phe	Asp	Lys	Ser	Ala	Asp	Gly	Met	Val	Arg	Gly	Glu	Gly	Cys	Gly	325	330	335
Val	Ile	Val	Leu	Gln	Arg	Leu	Ser	Asp	Ala	Arg	Leu	Glu	Gly	Arg	Arg	340	345	350
Ile	Leu	Ala	Ile	Leu	Thr	Gly	Ser	Ala	Val	Asn	Gln	Asp	Gly	Lys	Ser	355	360	365
Asn	Gly	Ile	Met	Ala	Pro	Asn	Pro	Ser	Ala	Gln	Ile	Gly	Val	Leu	Glu	370	375	380
Asn	Ala	Cys	Lys	Ser	Ala	Arg	Val	Asp	Pro	Leu	Glu	Ile	Gly	Tyr	Val	385	390	395
Glu	Ala	His	Gly	Thr	Gly	Thr	Ser	Leu	Gly	Asp	Arg	Ile	Glu	Ala	His	405	410	415
Ala	Leu	Gly	Met	Val	Phe	Gly	Arg	Lys	Arg	Pro	Gly	Ser	Gly	Pro	Leu	420	425	430
Met	Ile	Gly	Ser	Ile	Lys	Pro	Asn	Ile	Gly	His	Leu	Glu	Gly	Ala	Ala	435	440	445
Gly	Ile	Ala	Gly	Leu	Ile	Lys	Ala	Val	Leu	Met	Val	Glu	Arg	Gly	Ser	450	455	460
Leu	Leu	Pro	Ser	Gly	Gly	Phe	Thr	Glu	Pro	Asn	Pro	Ala	Ile	Pro	Phe	465	470	475
Thr	Glu	Leu	Gly	Leu	Arg	Val	Val	Asp	Glu	Leu	Gln	Glu	Trp	Pro	Val	485	490	495
Val	Ala	Gly	Arg	Pro	Arg	Arg	Ala	Gly	Val	Ser	Ser	Phe	Gly	Phe	Gly			

			500								505								510				
Gly	Thr	Asn	Ala	His	Val	Ile	Val	Glu	Glu	Ala	Gly	Ser	Val	Gly	Ala								
		515					520					525											
Asp	Thr	Val	Ser	Gly	Arg	Ala	Asp	Val	Gly	Gly	Ser	Gly	Gly	Gly	Val								
		530				535					540												
Val	Ala	Trp	Val	Ile	Ser	Gly	Lys	Thr	Ala	Ser	Ala	Leu	Ala	Ala	Gln								
545					550					555					560								
Ala	Gly	Arg	Leu	Gly	Arg	Tyr	Val	Arg	Ala	Arg	Pro	Ala	Leu	Asp	Val								
				565					570					575									
Val	Asp	Val	Gly	Tyr	Ser	Leu	Val	Ser	Thr	Arg	Ser	Val	Phe	Asp	His								
			580					585					590										
Arg	Ala	Val	Val	Val	Gly	Gln	Thr	Arg	Asp	Glu	Leu	Leu	Ala	Gly	Leu								
		595					600					605											
Ala	Gly	Val	Val	Ala	Gly	Arg	Pro	Glu	Ala	Gly	Val	Val	Cys	Gly	Val								
		610				615					620												
Gly	Lys	Pro	Ala	Gly	Lys	Thr	Ala	Phe	Val	Phe	Ala	Gly	Gln	Gly	Ser								
625					630					635					640								
Gln	Trp	Leu	Gly	Met	Gly	Ser	Glu	Leu	Tyr	Ala	Ala	Tyr	Pro	Val	Phe								
				645					650					655									
Ala	Glu	Ala	Leu	Asp	Ala	Val	Val	Asp	Glu	Leu	Asp	Arg	His	Leu	Arg								
			660					665					670										
Tyr	Pro	Leu	Arg	Asp	Val	Ile	Trp	Gly	His	Asp	Gln	Asp	Leu	Leu	Asn								
			675				680					685											
Thr	Thr	Glu	Phe	Ala	Gln	Pro	Ala	Leu	Phe	Ala	Val	Glu	Val	Ala	Leu								
		690			695						700												
Tyr	Arg	Leu	Leu	Met	Ser	Trp	Gly	Val	Arg	Pro	Gly	Leu	Val	Leu	Gly								
705					710					715				720									
His	Ser	Val	Gly	Glu	Leu	Ala	Ala	Ala	His	Val	Ala	Gly	Ala	Leu	Cys								
				725					730					735									
Leu	Pro	Asp	Ala	Ala	Met	Leu	Val	Ala	Ala	Arg	Gly	Arg	Leu	Met	Gln								
			740					745					750										
Ala	Leu	Pro	Ala	Gly	Gly	Ala	Met	Phe	Ala	Val	Gln	Ala	Arg	Glu	Asp								
			755				760					765											
Glu	Val	Ala	Pro	Met	Leu	Gly	His	Asp	Val	Ser	Ile	Ala	Ala	Val	Asn								
		770				775					780												
Gly	Pro	Ala	Ser	Val	Val	Ile	Ser	Gly	Ala	His	Asp	Ala	Val	Ser	Ala								
785				790					</														

Leu Pro Thr Tyr Ala Phe Gln His Gln Lys Phe Trp Leu Ala Pro Ala
 965 970 975
 Pro Ser Val Ser Asp Pro Thr Ala Ala Gly Gln Ile Gly Ala Ser Asp
 980 985 990
 Gly Gly Ala Glu Leu Leu Ala Ser Ser Gly Phe Ala Ala Arg Leu Ala
 995 1000 1005
 Gly Arg Ser Ala Asp Glu Gln Leu Ala Ala Ala Ile Glu Val Val Cys
 1010 1015 1020
 Glu His Ala Ala Ala Val Leu Gly Arg Asp Gly Ala Ala Gly Leu Asp
 1025 1030 1035 1040
 Ala Gly Gln Ala Phe Ala Asp Ser Gly Phe Asn Ser Leu Ser Ala Val
 1045 1050 1055
 Glu Leu Arg Asn Arg Leu Thr Ala Val Thr Ala Val Thr Leu Pro Ala
 1060 1065 1070
 Thr Ala Ile Phe Asp His Pro Thr Pro Thr Glu Leu Ala Gln Tyr Leu
 1075 1080 1085
 Ile Thr Gln Ile Asp Gly His Gly Ser Ser Ala Ala Ala Ala Ala Asn
 1090 1095 1100
 Pro Ala Glu Arg Ile Asp Ala Leu Thr Asp Leu Phe Leu Gln Ala Cys
 1105 1110 1115 1120
 Asp Ala Gly Arg Asp Ala Asp Gly Trp Lys Met Val Ala Leu Ala Ser
 1125 1130 1135
 Asn Thr Arg Glu Arg Met Ser Ser Pro Val Arg Asn Asn Val Ser Lys
 1140 1145 1150
 Asn Val Ala Leu Leu Ala Asp Gly Ile Ser Asp Val Val Val Ile Cys
 1155 1160 1165
 Ile Pro Thr Leu Thr Val Leu Ser Asp Gln Arg Glu Tyr Arg Asp Ile
 1170 1175 1180
 Ala Asn Ala Met Thr Gly Arg His Ser Val Tyr Ser Leu Thr Leu Pro
 1185 1190 1195 1200
 Gly Phe Asp Ser Ser Asp Ala Leu Pro Gln Asn Ala Asp Met Ile Val
 1205 1210 1215
 Glu Thr Val Ser Asn Ala Ile Ile Asp Val Val Gly Gly Ser Cys Arg
 1220 1225 1230
 Phe Val Leu Ser Gly Tyr Ser Ser Gly Gly Val Leu Ala Tyr Ala Leu
 1235 1240 1245
 Cys Ser His Leu Ser Val Lys His Gln Arg Asn Pro Leu Gly Val Ala
 1250 1255 1260
 Leu Ile Asp Thr Tyr Leu Pro Ser Gln Ile Ala Asn Pro Ser Met Asn
 1265 1270 1275 1280
 Glu Gly Phe Ser Pro Asn Asp Thr Gly Lys Gly Leu Ser Arg Glu Val
 1285 1290 1295
 Ile Arg Val Ala Arg Met Leu Asn Arg Leu Thr Ala Thr Arg Leu Thr
 1300 1305 1310
 Ala Ala Ala Thr Tyr Ala Ala Ile Phe Gln Ala Trp Glu Pro Gly Arg
 1315 1320 1325
 Ser Met Ala Pro Val Leu Asn Ile Val Ala Lys Asp Arg Ile Ala Thr
 1330 1335 1340
 Val Glu Asn Leu Arg Glu Glu Arg Ile Asn Arg Trp Arg Thr Ala Ala
 1345 1350 1355 1360
 Ala Glu Ala Ala Tyr Ser Val Ala Glu Val Pro Gly Asp His Phe Gly
 1365 1370 1375
 Met Met Ser Thr Ser Ser Glu Ala Ile Ala Thr Glu Ile His Asp Trp
 1380 1385 1390
 Ile Ser Gly Leu Val Arg Gly Pro His Arg
 1395 1400

<210> 167
 <211> 728
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 167

Val	Thr	His	Pro	Asp	Pro	Ala	Arg	Gln	Leu	Thr	Leu	Thr	Ala	Arg	Leu
1				5					10					15	
Asn	Thr	Ser	Ala	Val	Asp	Ser	Arg	Arg	Gly	Val	Val	Arg	Leu	His	Pro
			20					25					30		
Asn	Ala	Ile	Ala	Ala	Leu	Gly	Ile	Arg	Glu	Trp	Asp	Ala	Val	Ser	Leu
		35					40					45			
Thr	Gly	Ser	Arg	Thr	Thr	Ala	Ala	Val	Ala	Gly	Leu	Ala	Ala	Ala	Asp
	50					55					60				
Thr	Ala	Val	Gly	Thr	Val	Leu	Leu	Asp	Asp	Val	Thr	Leu	Ser	Asn	Ala
65					70				75						80
Gly	Leu	Arg	Glu	Gly	Thr	Glu	Val	Ile	Val	Ser	Pro	Val	Thr	Val	Tyr
				85					90					95	
Gly	Ala	Arg	Ser	Val	Thr	Leu	Ser	Gly	Ser	Thr	Leu	Ala	Thr	Gln	Ser
			100					105					110		
Val	Pro	Pro	Val	Thr	Leu	Arg	Gln	Ala	Leu	Leu	Gly	Lys	Val	Met	Thr
		115					120					125			
Val	Gly	Asp	Ala	Val	Ser	Leu	Leu	Pro	Arg	Asp	Leu	Gly	Pro	Gly	Thr
	130					135					140				
Ser	Thr	Ser	Ala	Ala	Ser	Arg	Ala	Leu	Ala	Ala	Val	Gly	Ile	Ser	
145					150					155				160	
Trp	Thr	Ser	Glu	Leu	Leu	Thr	Val	Thr	Gly	Val	Asp	Pro	Asp	Gly	Pro
				165					170					175	
Val	Ser	Val	Gln	Pro	Asn	Ser	Leu	Val	Thr	Trp	Gly	Ala	Gly	Val	Pro
			180					185					190		
Ala	Ala	Met	Gly	Thr	Ser	Thr	Ala	Gly	Gln	Val	Ser	Ile	Ser	Ser	Pro
		195					200					205			
Glu	Ile	Gln	Ile	Glu	Glu	Leu	Lys	Gly	Ala	Gln	Pro	Gln	Ala	Ala	Lys
	210					215					220				
Leu	Thr	Glu	Trp	Leu	Lys	Leu	Ala	Leu	Asp	Glu	Pro	His	Leu	Leu	Gln
225					230					235					240
Thr	Leu	Gly	Ala	Gly	Thr	Asn	Leu	Gly	Val	Leu	Val	Ser	Gly	Pro	Ala
				245					250					255	
Gly	Val	Gly	Lys	Ala	Thr	Leu	Val	Arg	Ala	Val	Cys	Asp	Gly	Arg	Arg
			260					265					270		
Leu	Val	Thr	Leu	Asp	Gly	Pro	Glu	Ile	Gly	Ala	Leu	Ala	Ala	Gly	Asp
	275						280					285			
Arg	Val	Lys	Ala	Val	Ala	Ser	Ala	Val	Gln	Ala	Val	Arg	His	Glu	Gly
	290					295						300			
Gly	Val	Leu	Leu	Ile	Thr	Asp	Ala	Asp	Ala	Leu	Leu	Pro	Ala	Ala	Ala
305					310					315					320
Glu	Pro	Val	Ala	Ser	Leu	Ile	Leu	Ser	Glu	Leu	Arg	Thr	Ala	Val	Ala
				325					330					335	
Thr	Ala	Gly	Val	Val	Leu	Ile	Ala	Thr	Ser	Ala	Arg	Pro	Asp	Gln	Leu
			340					345					350		
Asp	Ala	Arg	Leu	Arg	Ser	Pro	Glu	Leu	Cys	Asp	Arg	Glu	Leu	Gly	Leu
	355						360					365			
Pro	Leu	Pro	Asp	Ala	Ala	Thr	Arg	Lys	Ser	Leu	Leu	Glu	Ala	Leu	Leu
	370					375					380				
Asn	Pro	Val	Pro	Thr	Gly	Asp	Leu	Asn	Leu	Asp	Glu	Ile	Ala	Ser	Arg
385					390					395					400
Thr	Pro	Gly	Phe	Val	Val	Ala	Asp	Leu	Ala	Ala	Leu	Val	Arg	Glu	Ala

[illegible]

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<210> 168
<211> 286
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 168															
Met	Ile	Gly	Lys	Pro	Arg	Gly	Arg	Arg	Gly	Val	Asn	Leu	Gln	Ile	Leu
1				5					10					15	
Pro	Ser	Ala	Met	Thr	Val	Leu	Ser	Ile	Cys	Ala	Gly	Leu	Thr	Ala	Ile
			20					25					30		
Lys	Phe	Ala	Leu	Glu	His	Gln	Pro	Lys	Ala	Ala	Met	Ala	Leu	Ile	Ala
		35					40					45			
Ala	Ala	Ala	Ile	Leu	Asp	Gly	Leu	Asp	Gly	Arg	Val	Ala	Arg	Ile	Leu
		50				55					60				
Asp	Ala	Gln	Ser	Arg	Met	Gly	Ala	Glu	Ile	Asp	Ser	Leu	Ala	Asp	Ala

65					70					75				80	
Val	Asn	Phe	Gly	Val	Thr	Pro	Ala	Leu	Val	Leu	Tyr	Val	Ser	Met	Leu
				85					90					95	
Ser	Lys	Trp	Pro	Val	Gly	Trp	Val	Val	Val	Leu	Leu	Tyr	Ala	Val	Cys
			100					105						110	
Val	Val	Leu	Arg	Leu	Ala	Arg	Tyr	Asn	Ala	Leu	Gln	Asp	Asp	Gly	Thr
			115				120						125		
Gln	Pro	Ala	Tyr	Ala	His	Glu	Phe	Phe	Val	Gly	Met	Pro	Ala	Pro	Ala
	130					135					140				
Gly	Ala	Val	Ser	Met	Ile	Gly	Leu	Leu	Ala	Leu	Lys	Met	Gln	Phe	Gly
145					150					155					160
Glu	Gly	Trp	Trp	Thr	Ser	Gly	Trp	Phe	Leu	Ser	Phe	Trp	Val	Thr	Gly
				165					170					175	
Thr	Ser	Ile	Leu	Leu	Val	Ser	Gly	Ile	Pro	Met	Lys	Lys	Met	His	Ala
			180					185						190	
Val	Ser	Val	Pro	Pro	Asn	Tyr	Ala	Ala	Ala	Leu	Leu	Ala	Val	Leu	Ala
			195				200						205		
Ile	Cys	Ala	Ala	Ala	Ala	Val	Leu	Ala	Pro	Tyr	Leu	Leu	Ile	Trp	Val
	210					215							220		
Ile	Ile	Ile	Ala	Tyr	Met	Cys	His	Ile	Pro	Phe	Ala	Val	Arg	Ser	Gln
225					230					235					240
Arg	Trp	Leu	Ala	Gln	His	Pro	Glu	Val	Trp	Asp	Asp	Lys	Pro	Lys	Gln
				245					250					255	
Arg	Arg	Ala	Val	Arg	Arg	Ala	Ser	Arg	Arg	Ala	His	Pro	Tyr	Arg	Pro
			260					265					270		
Ser	Met	Ala	Arg	Leu	Gly	Leu	Arg	Lys	Pro	Gly	Arg	Arg	Leu		
		275					280					285			

<210> 169

<211> 540

<212> PRT

<213> Mycobacterium tuberculosis

<400> 169

Met	Ala	Lys	Thr	Ile	Ala	Tyr	Asp	Glu	Glu	Ala	Arg	Arg	Gly	Leu	Glu
1				5					10					15	
Arg	Gly	Leu	Asn	Ala	Leu	Ala	Asp	Ala	Val	Lys	Val	Thr	Leu	Gly	Pro
			20					25					30		
Lys	Gly	Arg	Asn	Val	Val	Leu	Glu	Lys	Lys	Trp	Gly	Ala	Pro	Thr	Ile
		35				40						45			
Thr	Asn	Asp	Gly	Val	Ser	Ile	Ala	Lys	Glu	Ile	Glu	Leu	Glu	Asp	Pro
	50					55				60					
Tyr	Glu	Lys	Ile	Gly	Ala	Glu	Leu	Val	Lys	Glu	Val	Ala	Lys	Lys	Thr
65					70					75					80
Asp	Asp	Val	Ala	Gly	Asp	Gly	Thr	Thr	Thr	Ala	Thr	Val	Leu	Ala	Gln
			85						90					95	
Ala	Leu	Val	Arg	Glu	Gly	Leu	Arg	Asn	Val	Ala	Ala	Gly	Ala	Asn	Pro
			100					105					110		
Leu	Gly	Leu	Lys	Arg	Gly	Ile	Glu	Lys	Ala	Val	Glu	Lys	Val	Thr	Glu
		115				120						125			
Thr	Leu	Leu	Lys	Gly	Ala	Lys	Glu	Val	Glu	Thr	Lys	Glu	Gln	Ile	Ala
	130					135					140				
Ala	Thr	Ala	Ala	Ile	Ser	Ala	Gly	Asp	Gln	Ser	Ile	Gly	Asp	Leu	Ile
145					150					155					160
Ala	Glu	Ala	Met	Asp	Lys	Val	Gly	Asn	Glu	Gly	Val	Ile	Thr	Val	Glu
			165						170					175	
Glu	Ser	Asn	Thr	Phe	Gly	Leu	Gln	Leu	Glu	Leu	Thr	Glu	Gly	Met	Arg

180							185					190				
Phe	Asp	Lys	Gly	Tyr	Ile	Ser	Gly	Tyr	Phe	Val	Thr	Asp	Pro	Glu	Arg	
195							200					205				
Gln	Glu	Ala	Val	Leu	Glu	Asp	Pro	Tyr	Ile	Leu	Leu	Val	Ser	Ser	Lys	
210							215					220				
Val	Ser	Thr	Val	Lys	Asp	Leu	Leu	Pro	Leu	Leu	Glu	Lys	Val	Ile	Gly	
225							230					235				
Ala	Gly	Lys	Pro	Leu	Leu	Ile	Ile	Ala	Glu	Asp	Val	Glu	Gly	Glu	Ala	
245							250					255				
Leu	Ser	Thr	Leu	Val	Val	Asn	Lys	Ile	Arg	Gly	Thr	Phe	Lys	Ser	Val	
260							265					270				
Ala	Val	Lys	Ala	Pro	Gly	Phe	Gly	Asp	Arg	Arg	Lys	Ala	Met	Leu	Gln	
275							280					285				
Asp	Met	Ala	Ile	Leu	Thr	Gly	Gly	Gln	Val	Ile	Ser	Glu	Glu	Val	Gly	
290							295					300				
Leu	Thr	Leu	Glu	Asn	Ala	Asp	Leu	Ser	Leu	Leu	Gly	Lys	Ala	Arg	Lys	
305							310					315				
Val	Val	Val	Thr	Lys	Asp	Glu	Thr	Thr	Ile	Val	Glu	Gly	Ala	Gly	Asp	
325							330					335				
Thr	Asp	Ala	Ile	Ala	Gly	Arg	Val	Ala	Gln	Ile	Arg	Gln	Glu	Ile	Glu	
340							345					350				
Asn	Ser	Asp	Ser	Asp	Tyr	Asp	Arg	Glu	Lys	Leu	Gln	Glu	Arg	Leu	Ala	
355							360					365				
Lys	Leu	Ala	Gly	Gly	Val	Ala	Val	Ile	Lys	Ala	Gly	Ala	Ala	Thr	Glu	
370							375					380				
Val	Glu	Leu	Lys	Glu	Arg	Lys	His	Arg	Ile	Glu	Asp	Ala	Val	Arg	Asn	
385							390					395				
Ala	Lys	Ala	Ala	Val	Glu	Glu	Gly	Ile	Val	Ala	Gly	Gly	Gly	Val	Thr	
405							410					415				
Leu	Leu	Gln	Ala	Ala	Pro	Thr	Leu	Asp	Glu	Leu	Lys	Leu	Glu	Gly	Asp	
420							425					430				
Glu	Ala	Thr	Gly	Ala	Asn	Ile	Val	Lys	Val	Ala	Leu	Glu	Ala	Pro	Leu	
435							440					445				
Lys	Gln	Ile	Ala	Phe	Asn	Ser	Gly	Leu	Glu	Pro	Gly	Val	Val	Ala	Glu	
450							455					460				
Lys	Val	Arg	Asn	Leu	Pro	Ala	Gly	His	Gly	Leu	Asn	Ala	Gln	Thr	Gly	
465							470					475				
Val	Tyr	Glu	Asp	Leu	Leu	Ala	Ala	Gly	Val	Ala	Asp	Pro	Val	Lys	Val	
485							490					495				
Thr	Arg	Ser	Ala	Leu	Gln	Asn	Ala	Ala	Ser	Ile	Ala	Gly	Leu	Phe	Leu	
500							505					510				
Thr	Thr	Glu	Ala	Val	Val	Ala	Asp	Lys	Pro	Glu	Lys	Glu	Lys	Ala	Ser	
515							520					525				
Val	Pro	Gly	Gly	Gly	Asp	Met	Gly	Gly	Met	Asp	Phe					
530							535					540				

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<210> 170
<211> 369
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 170															
Met	Lys	Arg	Ser	Gly	Val	Gly	Ser	Leu	Phe	Ala	Gly	Ala	His	Ile	Ala
1				5					10					15	
Glu	Ala	Val	Pro	Leu	Ala	Pro	Leu	Thr	Thr	Leu	Arg	Val	Gly	Pro	Ile
			20					25					30		
Ala	Arg	Arg	Val	Ile	Thr	Cys	Thr	Ser	Ala	Glu	Gln	Val	Val	Ala	Ala

<400> 171															
Val	Val	Ile	Arg	Val	Leu	Phe	Arg	Pro	Val	Ser	Leu	Ile	Pro	Val	Asn
1				5					10				15		
Asn	Ser	Ser	Thr	Pro	Gln	Ser	Gln	Gly	Pro	Ile	Ser	Arg	Arg	Leu	Ala
			20					25					30		
Leu	Thr	Ala	Leu	Gly	Phe	Gly	Val	Leu	Ala	Pro	Asn	Val	Leu	Val	Ala
		35					40					45			
Cys	Ala	Gly	Lys	Val	Thr	Lys	Leu	Ala	Glu	Lys	Arg	Pro	Pro	Pro	Ala

50	55	60
Pro Arg Leu Thr Phe Arg Pro Ala Asp Ser Ala Ala Asp Val Val Pro		
65	70	75
Ile Ala Pro Ile Ser Val Glu Val Gly Asp Gly Trp Phe Gln Arg Val		80
	85	90
Ala Leu Thr Asn Ser Ala Gly Lys Val Val Ala Gly Ala Tyr Ser Arg		95
	100	105
Asp Arg Thr Ile Tyr Thr Ile Thr Glu Pro Leu Gly Tyr Asp Thr Thr		110
	115	120
Tyr Thr Trp Ser Gly Ser Ala Val Gly His Asp Gly Lys Ala Val Pro		125
	130	135
Val Ala Gly Lys Phe Thr Thr Val Ala Pro Val Lys Thr Ile Asn Ala		140
145	150	155
Gly Phe Gln Leu Ala Asp Gly Gln Thr Val Gly Ile Ala Ala Pro Val		160
	165	170
Ile Ile Gln Phe Asp Ser Pro Ile Ser Asp Lys Ala Ala Val Glu Arg		175
	180	185
Ala Leu Thr Val Thr Thr Asp Pro Pro Val Glu Gly Gly Trp Ala Trp		190
	195	200
Leu Pro Asp Glu Ala Gln Gly Ala Arg Val His Trp Arg Pro Arg Glu		205
	210	215
Tyr Tyr Pro Ala Gly Thr Thr Val Asp Val Asp Ala Lys Leu Tyr Gly		220
225	230	235
Leu Pro Phe Gly Asp Gly Ala Tyr Gly Ala Gln Asp Met Ser Leu His		240
	245	250
Phe Gln Ile Gly Arg Arg Gln Val Val Lys Ala Glu Val Ser Ser His		255
	260	265
Arg Ile Gln Val Val Thr Asp Ala Gly Val Ile Met Asp Phe Pro Cys		270
	275	280
Ser Tyr Gly Glu Ala Asp Leu Ala Arg Asn Val Thr Arg Asn Gly Ile		285
	290	295
His Val Val Thr Glu Lys Tyr Ser Asp Phe Tyr Met Ser Asn Pro Ala		300
305	310	315
Ala Gly Tyr Ser His Ile His Glu Arg Trp Ala Val Arg Ile Ser Asn		320
	325	330
Asn Gly Glu Phe Ile His Ala Asn Pro Met Ser Ala Gly Ala Gln Gly		335
	340	345
Asn Ser Asn Val Thr Asn Gly Cys Ile Asn Leu Ser Thr Glu Asn Ala		350
	355	360
Glu Gln Tyr Tyr Arg Ser Ala Val Tyr Gly Asp Pro Val Glu Val Thr		365
	370	375
Gly Ser Ser Ile Gln Leu Ser Tyr Ala Asp Gly Asp Ile Trp Asp Trp		380
385	390	395
Ala Val Asp Trp Asp Thr Trp Val Ser Met Ser Ala Leu Pro Pro Pro		400
	405	410
Ala Ala Lys Pro Ala Ala Thr Gln Ile Pro Val Thr Ala Pro Val Thr		415
	420	425
Pro Ser Asp Ala Pro Thr Pro Ser Gly Thr Pro Thr Thr Asn Gly		430
	435	440
Pro Gly Gly		445
450		

<210> 172

<211> 249

<212> PRT

<213> Mycobacterium tuberculosis

<400> 172

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Met Ala Asn Thr Gly Ser Leu Val Leu Leu Arg His Gly Glu Ser Asp
 1           5           10           15
Trp Asn Ala Leu Asn Leu Phe Thr Gly Trp Val Asp Val Gly Leu Thr
           20           25           30
Asp Lys Gly Gln Ala Glu Ala Val Arg Ser Gly Glu Leu Ile Ala Glu
           35           40           45
His Asp Leu Leu Pro Asp Val Leu Tyr Thr Ser Leu Leu Arg Arg Ala
           50           55           60
Ile Thr Thr Ala His Leu Ala Leu Asp Ser Ala Asp Arg Leu Trp Ile
65           70           75           80
Pro Val Arg Arg Ser Trp Arg Leu Asn Glu Arg His Tyr Gly Ala Leu
           85           90           95
Gln Gly Leu Asp Lys Ala Glu Thr Lys Ala Arg Tyr Gly Glu Glu Gln
           100          105          110
Phe Met Ala Trp Arg Arg Ser Tyr Asp Thr Pro Pro Pro Pro Ile Glu
           115          120          125
Arg Gly Ser Gln Phe Ser Gln Asp Ala Asp Pro Arg Tyr Ala Asp Ile
           130          135          140
Gly Gly Gly Pro Leu Thr Glu Cys Leu Ala Asp Val Val Ala Arg Phe
145          150          155          160
Leu Pro Tyr Phe Thr Asp Val Ile Val Gly Asp Leu Arg Val Gly Lys
           165          170          175
Thr Val Leu Ile Val Ala His Gly Asn Ser Leu Arg Ala Leu Val Lys
           180          185          190
His Leu Asp Gln Met Ser Asp Asp Glu Ile Val Gly Leu Asn Ile Pro
           195          200          205
Thr Gly Ile Pro Leu Arg Tyr Asp Leu Asp Ser Ala Met Arg Pro Leu
           210          215          220
Val Arg Gly Gly Thr Tyr Leu Asp Pro Glu Ala Ala Ala Ala Gly Ala
225          230          235          240
Ala Ala Val Ala Gly Gln Gly Arg Gly
           245

```

<210> 173

<211> 410

<212> PRT

<213> Mycobacterium tuberculosis

<400> 173

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Val Thr Val Phe Ser Ala Leu Leu Leu Ala Gly Val Leu Ser Ala Leu
 1           5           10           15
Ala Leu Ala Val Gly Gly Ala Val Gly Met Arg Leu Thr Ser Arg Val
           20           25           30
Val Glu Gln Arg Gln Arg Val Ala Thr Glu Trp Ser Gly Ile Thr Val
           35           40           45
Ser Gln Met Leu Gln Cys Ile Val Thr Leu Met Pro Leu Gly Ala Ala
           50           55           60
Val Val Asp Thr His Arg Asp Val Val Tyr Leu Asn Glu Arg Ala Lys
65           70           75           80
Glu Leu Gly Leu Val Arg Asp Arg Gln Leu Asp Asp Gln Ala Trp Arg
           85           90           95
Ala Ala Arg Gln Ala Leu Gly Gly Glu Asp Val Glu Phe Asp Leu Ser
           100          105          110
Pro Arg Lys Arg Ser Ala Thr Gly Arg Ser Gly Leu Ser Val His Gly
           115          120          125
His Ala Arg Leu Leu Ser Glu Glu Asp Arg Arg Phe Ala Val Val Phe

```

130		135		140
Val His Asp Gln Ser Asp Tyr Ala Arg Met Glu Ala Ala Arg Arg Asp				
145		150		155
Phe Val Ala Asn Val Ser His Glu Leu Lys Thr Pro Val Gly Ala Met				
	165		170	175
Ala Leu Leu Ala Glu Ala Leu Leu Ala Ser Ala Asp Asp Ser Glu Thr				
	180		185	190
Val Arg Arg Phe Ala Glu Lys Val Leu Ile Glu Ala Asn Arg Leu Gly				
	195		200	205
Asp Met Val Ala Glu Leu Ile Glu Leu Ser Arg Leu Gln Gly Ala Glu				
	210		215	220
Arg Leu Pro Asn Met Thr Asp Val Asp Val Asp Thr Ile Val Ser Glu				
225		230		235
Ala Ile Ser Arg His Lys Val Ala Ala Asp Asn Ala Asp Ile Glu Val				
	245		250	255
Arg Thr Asp Ala Pro Ser Asn Leu Arg Val Leu Gly Asp Gln Thr Leu				
	260		265	270
Leu Val Thr Ala Leu Ala Asn Leu Val Ser Asn Ala Ile Ala Tyr Ser				
	275		280	285
Pro Arg Gly Ser Leu Val Ser Ile Ser Arg Arg Arg Arg Gly Ala Asn				
	290		295	300
Ile Glu Ile Ala Val Thr Asp Arg Gly Ile Gly Ile Ala Pro Glu Asp				
305		310		315
Gln Glu Arg Val Phe Glu Arg Phe Phe Arg Gly Asp Lys Ala Arg Ser				
	325		330	335
Arg Ala Thr Gly Gly Ser Gly Leu Gly Leu Ala Ile Val Lys His Val				
	340		345	350
Ala Ala Asn His Asp Gly Thr Ile Arg Val Trp Ser Lys Pro Gly Thr				
	355		360	365
Gly Ser Thr Phe Thr Leu Ala Leu Pro Ala Leu Ile Glu Ala Tyr His				
	370		375	380
Asp Asp Glu Arg Pro Glu Gln Ala Arg Glu Pro Glu Leu Arg Ser Asn				
385		390		395
Arg Ser Gln Arg Glu Glu Glu Leu Ser Arg				400
	405		410	

<210> 174

<211> 295

<212> PRT

<213> Mycobacterium tuberculosis

<400> 174

Met Leu Phe Gly Met Ala Arg Ile Ala Ile Ile Gly Gly Gly Ser Ile	
1	5
Gly Glu Ala Leu Leu Ser Gly Leu Leu Arg Ala Gly Arg Gln Val Lys	
	20
Asp Leu Val Val Ala Glu Arg Met Pro Asp Arg Ala Asn Tyr Leu Ala	
	35
Gln Thr Tyr Ser Val Leu Val Thr Ser Ala Ala Asp Ala Val Glu Asn	
	50
Ala Thr Phe Val Val Val Ala Val Lys Pro Ala Asp Val Glu Pro Val	
65	70
Ile Ala Asp Leu Ala Asn Ala Thr Ala Ala Glu Asn Asp Ser Ala	
	85
Glu Gln Val Phe Val Thr Val Val Ala Gly Ile Thr Ile Ala Tyr Phe	
	100
Glu Ser Lys Leu Pro Ala Gly Thr Pro Val Val Arg Ala Met Pro Asn	
	105
	110

Ala	Ala	115	Ala	Leu	Val	Gly	Ala	120	Gly	Val	Thr	Ala	Leu	125	Ala	Lys	Gly	Arg
130							135						140					
Phe	Val	Thr	Pro	Gln	Gln	Leu	Glu	Glu	Val	Ser	Ala	Leu	Phe	Asp	Ala			
145						150				155								160
Val	Gly	Gly	Val	Leu	Thr	Val	Pro	Glu	Ser	Gln	Leu	Asp	Ala	Val	Thr			
				165					170									175
Ala	Val	Ser	Gly	Ser	Gly	Pro	Ala	Tyr	Phe	Phe	Leu	Leu	Val	Glu	Ala			
			180						185									190
Leu	Val	Asp	Ala	Gly	Val	Gly	Val	Gly	Leu	Ser	Arg	Gln	Val	Ala	Thr			
		195					200											
Asp	Leu	Ala	Ala	Gln	Thr	Met	Ala	Gly	Ser	Ala	Ala	Met	Leu	Leu	Glu			
210						215						220						
Arg	Met	Glu	Gln	Asp	Gln	Gly	Gly	Ala	Asn	Gly	Glu	Leu	Met	Gly	Leu			
225					230						235							240
Arg	Val	Asp	Leu	Thr	Ala	Ser	Arg	Leu	Arg	Ala	Ala	Val	Thr	Ser	Pro			
				245					250									255
Gly	Gly	Thr	Thr	Ala	Ala	Ala	Leu	Arg	Glu	Leu	Glu	Arg	Gly	Gly	Phe			
			260						265									270
Arg	Met	Ala	Val	Asp	Ala	Ala	Val	Gln	Ala	Ala	Lys	Ser	Arg	Ser	Glu			
		275					280											
Gln	Leu	Arg	Ile	Thr	Pro	Glu												
		290				295												

<210> 175

<211> 529

<212> PRT

<213> Mycobacterium tuberculosis

<400> 175

Met	Trp	Arg	Ser	Leu	Thr	Ser	Met	Gly	Thr	Ala	Leu	Val	Leu	Leu	Phe			
1				5					10						15			
Leu	Leu	Ala	Leu	Ala	Ala	Ile	Pro	Gly	Ala	Leu	Leu	Pro	Gln	Arg	Gly			
			20					25					30					
Leu	Asn	Ala	Ala	Lys	Val	Asp	Asp	Tyr	Leu	Ala	Ala	His	Pro	Leu	Ile			
	35					40						45						
Gly	Pro	Trp	Leu	Asp	Glu	Leu	Gln	Ala	Phe	Asp	Val	Phe	Ser	Ser	Phe			
	50				55						60							
Trp	Phe	Thr	Ala	Ile	Tyr	Val	Leu	Leu	Phe	Val	Ser	Leu	Val	Gly	Cys			
65				70						75					80			
Leu	Ala	Pro	Arg	Thr	Ile	Glu	His	Ala	Arg	Ser	Leu	Arg	Ala	Thr	Pro			
			85						90						95			
Val	Ala	Ala	Pro	Arg	Asn	Leu	Ala	Arg	Leu	Pro	Lys	His	Ala	His	Ala			
			100					105						110				
Arg	Leu	Ala	Gly	Glu	Pro	Ala	Ala	Leu	Ala	Ala	Thr	Ile	Thr	Gly	Arg			
		115				120								125				
Leu	Arg	Gly	Trp	Arg	Ser	Ile	Thr	Arg	Gln	Gln	Gly	Asp	Ser	Val	Glu			
	130				135						140							
Val	Ser	Ala	Glu	Lys	Gly	Tyr	Leu	Arg	Glu	Phe	Gly	Asn	Leu	Val	Phe			
145				150						155								160
His	Phe	Ala	Leu	Leu	Gly	Leu	Leu	Val	Ala	Val	Ala	Val	Gly	Lys	Leu			
			165						170						175			
Phe	Gly	Tyr	Glu	Gly	Asn	Val	Ile	Val	Ile	Ala	Asp	Gly	Gly	Pro	Gly			
		180						185						190				
Phe	Cys	Ser	Ala	Ser	Pro	Ala	Ala	Phe	Asp	Ser	Phe	Arg	Ala	Gly	Asn			
		195				200						205						
Thr	Val	Asp	Gly	Thr	Ser	Leu	His	Pro	Ile	Cys	Val	Arg	Val	Asn	Asn			

210		215		220
Phe Gln Ala His Tyr Leu	Pro Ser Gly Gln Ala	Thr Ser Phe Ala Ala		
225	230	235	240	
Asp Ile Asp Tyr Gln Ala	Asp Pro Ala Thr Ala	Asp Leu Ile Ala Asn		
	245	250	255	
Ser Trp Arg Pro Tyr Arg	Leu Gln Val Asn His	Pro Leu Arg Val Gly		
	260	265	270	
Gly Asp Arg Val Tyr Leu	Gln Gly His Gly Tyr	Ala Pro Thr Phe Thr		
	275	280	285	
Val Thr Phe Pro Asp Gly	Gln Thr Arg Thr Ser	Thr Val Gln Trp Arg		
	290	295	300	
Pro Asp Asn Pro Gln Thr	Leu Leu Ser Ala Gly	Val Val Arg Ile Asp		
305	310	315	320	
Pro Pro Ala Gly Ser Tyr	Pro Asn Pro Asp Glu	Arg Arg Lys His Gln		
	325	330	335	
Ile Ala Ile Gln Gly Leu	Leu Ala Pro Thr Glu	Gln Leu Asp Gly Thr		
	340	345	350	
Leu Leu Ser Ser Arg Phe	Pro Ala Leu Asn Ala	Pro Ala Val Ala Ile		
	355	360	365	
Asp Ile Tyr Arg Gly Asp	Thr Gly Leu Asp Ser	Gly Arg Pro Gln Ser		
	370	375	380	
Leu Phe Thr Leu Asp His	Arg Leu Ile Glu Gln	Gly Arg Leu Val Lys		
385	390	395	400	
Glu Lys Arg Val Asn Leu	Arg Ala Gly Gln Gln	Val Arg Ile Asp Gln		
	405	410	415	
Gly Pro Ala Ala Gly Thr	Val Val Arg Phe Asp	Gly Ala Val Pro Phe		
	420	425	430	
Val Asn Leu Gln Val Ser	His Asp Pro Gly Gln	Ser Trp Val Leu Val		
	435	440	445	
Phe Ala Ile Thr Met Met	Ala Gly Leu Leu Val	Ser Leu Leu Val Arg		
	450	455	460	
Arg Arg Arg Val Trp Ala	Arg Ile Thr Pro Thr	Thr Ala Gly Thr Val		
465	470	475	480	
Asn Val Glu Leu Gly Gly	Leu Thr Arg Thr Asp	Asn Ser Gly Trp Gly		
	485	490	495	
Ala Glu Phe Glu Arg Leu	Thr Gly Arg Leu Leu	Ala Gly Phe Glu Ala		
	500	505	510	
Arg Ser Pro Asp Met Ala	Glu Ala Ala Ala Gly	Thr Gly Arg Asp Val		
	515	520	525	

Asp

<210> 176

<211> 1172

<212> PRT

<213> Mycobacterium tuberculosis

<400> 176

Leu Ala Asp Ser Arg Gln	Ser Lys Thr Ala Ala	Ser Pro Ser Pro Ser
1	5	10
Arg Pro Gln Ser Ser Ser	Asn Asn Ser Val Pro	Gly Ala Pro Asn Arg
	20	25
Val Ser Phe Ala Lys Leu	Arg Glu Pro Leu Glu	Val Pro Gly Leu Leu
	35	40
Asp Val Gln Thr Asp Ser	Phe Glu Trp Leu Ile	Gly Ser Pro Arg Trp
	50	55
Arg Glu Ser Ala Ala Glu	Arg Gly Asp Val Asn	Pro Val Gly Gly Leu
	60	

65					70					75				80	
Glu	Glu	Val	Leu	Tyr	Glu	Leu	Ser	Pro	Ile	Glu	Asp	Phe	Ser	Gly	Ser
				85					90					95	
Met	Ser	Leu	Ser	Phe	Ser	Asp	Pro	Arg	Phe	Asp	Asp	Val	Lys	Ala	Pro
			100					105					110		
Val	Asp	Glu	Cys	Lys	Asp	Lys	Asp	Met	Thr	Tyr	Ala	Ala	Pro	Leu	Phe
		115					120					125			
Val	Thr	Ala	Glu	Phe	Ile	Asn	Asn	Asn	Thr	Gly	Glu	Ile	Lys	Ser	Gln
	130					135					140				
Thr	Val	Phe	Met	Gly	Asp	Phe	Pro	Met	Met	Thr	Glu	Lys	Gly	Thr	Phe
145					150					155					160
Ile	Ile	Asn	Gly	Thr	Glu	Arg	Val	Val	Val	Ser	Gln	Leu	Val	Arg	Ser
			165					170						175	
Pro	Gly	Val	Tyr	Phe	Asp	Glu	Thr	Ile	Asp	Lys	Ser	Thr	Asp	Lys	Thr
		180						185					190		
Leu	His	Ser	Val	Lys	Val	Ile	Pro	Ser	Arg	Gly	Ala	Trp	Leu	Glu	Phe
	195						200					205			
Asp	Val	Asp	Lys	Arg	Asp	Thr	Val	Gly	Val	Arg	Ile	Asp	Arg	Lys	Arg
	210					215					220				
Arg	Gln	Pro	Val	Thr	Val	Leu	Leu	Lys	Ala	Leu	Gly	Trp	Thr	Ser	Glu
225					230					235					240
Gln	Ile	Val	Glu	Arg	Phe	Gly	Phe	Ser	Glu	Ile	Met	Arg	Ser	Thr	Leu
			245					250						255	
Glu	Lys	Asp	Asn	Thr	Val	Gly	Thr	Asp	Glu	Ala	Leu	Leu	Asp	Ile	Tyr
		260					265					270			
Arg	Lys	Leu	Arg	Pro	Gly	Glu	Pro	Pro	Thr	Lys	Glu	Ser	Ala	Gln	Thr
	275					280						285			
Leu	Leu	Glu	Asn	Leu	Phe	Phe	Lys	Glu	Lys	Arg	Tyr	Asp	Leu	Ala	Arg
	290				295						300				
Val	Gly	Arg	Tyr	Lys	Val	Asn	Lys	Lys	Leu	Gly	Leu	His	Val	Gly	Glu
305				310					315						320
Pro	Ile	Thr	Ser	Ser	Thr	Leu	Thr	Glu	Glu	Asp	Val	Val	Ala	Thr	Ile
			325					330						335	
Glu	Tyr	Leu	Val	Arg	Leu	His	Glu	Gly	Gln	Thr	Thr	Met	Thr	Val	Pro
		340					345					350			
Gly	Gly	Val	Glu	Val	Pro	Val	Glu	Thr	Asp	Asp	Ile	Asp	His	Phe	Gly
	355					360					365				
Asn	Arg	Arg	Leu	Arg	Thr	Val	Gly	Glu	Leu	Ile	Gln	Asn	Gln	Ile	Arg
	370				375						380				
Val	Gly	Met	Ser	Arg	Met	Glu	Arg	Val	Val	Arg	Glu	Arg	Met	Thr	Thr
385				390						395					400
Gln	Asp	Val	Glu	Ala	Ile	Thr	Pro	Gln	Thr	Leu	Ile	Asn	Ile	Arg	Pro
			405					410						415	
Val	Val	Ala	Ala	Ile	Lys	Glu	Phe	Phe	Gly	Thr	Ser	Gln	Leu	Ser	Gln
		420					425					430			
Phe	Met	Asp	Gln	Asn	Asn	Pro	Leu	Ser	Gly	Leu	Thr	His	Lys	Arg	Arg
	435					440					445				
Leu	Ser	Ala	Leu	Gly	Pro	Gly	Gly	Leu	Ser	Arg	Glu	Arg	Ala	Gly	Leu
	450				455					460					
Glu	Val	Arg	Asp	Val	His	Pro	Ser	His	Tyr	Gly	Arg	Met	Cys	Pro	Ile
465				470					475						480
Glu	Thr	Pro	Glu	Gly	Pro	Asn	Ile	Gly	Leu	Ile	Gly	Ser	Leu	Ser	Val
			485				490					495			
Tyr	Ala	Arg	Val	Asn	Pro	Phe	Gly	Phe	Ile	Glu	Thr	Pro	Tyr	Arg	Lys
	500						505					510			
Val	Val	Asp	Gly	Val	Val	Ser	Asp	Glu	Ile	Val	Tyr	Leu	Thr	Ala	Asp
	515					520					525				

Glu	Glu	Asp	Arg	His	Val	Val	Ala	Gln	Ala	Asn	Ser	Pro	Ile	Asp	Ala
530						535					540				
Asp	Gly	Arg	Phe	Val	Glu	Pro	Arg	Val	Leu	Val	Arg	Arg	Lys	Ala	Gly
545					550					555					560
Glu	Val	Glu	Tyr	Val	Pro	Ser	Ser	Glu	Val	Asp	Tyr	Met	Asp	Val	Ser
				565					570					575	
Pro	Arg	Gln	Met	Val	Ser	Val	Ala	Thr	Ala	Met	Ile	Pro	Phe	Leu	Glu
			580					585					590		
His	Asp	Asp	Ala	Asn	Arg	Ala	Leu	Met	Gly	Ala	Asn	Met	Gln	Arg	Gln
		595					600					605			
Ala	Val	Pro	Leu	Val	Arg	Ser	Glu	Ala	Pro	Leu	Val	Gly	Thr	Gly	Met
	610					615					620				
Glu	Leu	Arg	Ala	Ala	Ile	Asp	Ala	Gly	Asp	Val	Val	Val	Ala	Glu	Glu
625					630					635					640
Ser	Gly	Val	Ile	Glu	Glu	Val	Ser	Ala	Asp	Tyr	Ile	Thr	Val	Met	His
				645					650					655	
Asp	Asn	Gly	Thr	Arg	Arg	Thr	Tyr	Arg	Met	Arg	Lys	Phe	Ala	Arg	Ser
			660					665					670		
Asn	His	Gly	Thr	Cys	Ala	Asn	Gln	Cys	Pro	Ile	Val	Asp	Ala	Gly	Asp
		675					680					685			
Arg	Val	Glu	Ala	Gly	Gln	Val	Ile	Ala	Asp	Gly	Pro	Cys	Thr	Asp	Asp
	690					695					700				
Gly	Glu	Met	Ala	Leu	Gly	Lys	Asn	Leu	Leu	Val	Ala	Ile	Met	Pro	Trp
705					710					715					720
Glu	Gly	His	Asn	Tyr	Glu	Asp	Ala	Ile	Ile	Leu	Ser	Asn	Arg	Leu	Val
				725					730					735	
Glu	Glu	Asp	Val	Leu	Thr	Ser	Ile	His	Ile	Glu	Glu	His	Glu	Ile	Asp
			740					745					750		
Ala	Arg	Asp	Thr	Lys	Leu	Gly	Ala	Glu	Glu	Ile	Thr	Arg	Asp	Ile	Pro
		755					760					765			
Asn	Ile	Ser	Asp	Glu	Val	Leu	Ala	Asp	Leu	Asp	Glu	Arg	Gly	Ile	Val
	770					775					780				
Arg	Ile	Gly	Ala	Glu	Val	Arg	Asp	Gly	Asp	Ile	Leu	Val	Gly	Lys	Val
785					790					795					800
Thr	Pro	Lys	Gly	Glu	Thr	Glu	Leu	Thr	Pro	Glu	Glu	Arg	Leu	Leu	Arg
				805					810					815	
Ala	Ile	Phe	Gly	Glu	Lys	Ala	Arg	Glu	Val	Arg	Asp	Thr	Ser	Leu	Lys
			820					825					830		
Val	Pro	His	Gly	Glu	Ser	Gly	Lys	Val	Ile	Gly	Ile	Arg	Val	Phe	Ser
		835					840					845			
Arg	Glu	Asp	Glu	Asp	Glu	Leu	Pro	Ala	Gly	Val	Asn	Glu	Leu	Val	Arg
	850					855					860				
Val	Tyr	Val	Ala	Gln	Lys	Arg	Lys	Ile	Ser	Asp	Gly	Asp	Lys	Leu	Ala
865					870					875					880
Gly	Arg	His	Gly	Asn	Lys	Gly	Val	Ile	Gly	Lys	Ile	Leu	Pro	Val	Glu
				885					890					895	
Asp	Met	Pro	Phe	Leu	Ala	Asp	Gly	Thr	Pro	Val	Asp	Ile	Ile	Leu	Asn
			900					905					910		
Thr	His	Gly	Val	Pro	Arg	Arg	Met	Asn	Ile	Gly	Gln	Ile	Leu	Glu	Thr
			915				920						925		
His	Leu	Gly	Trp	Cys	Ala	His	Ser	Gly	Trp	Lys	Val	Asp	Ala	Ala	Lys
	930					935						940			
Gly	Val	Pro	Asp	Trp	Ala	Ala	Arg	Leu	Pro	Asp	Glu	Leu	Leu	Glu	Ala
945					950					955					960
Gln	Pro	Asn	Ala	Ile	Val	Ser	Thr	Pro	Val	Phe	Asp	Gly	Ala	Gln	Glu
				965					970					975	
Ala	Glu	Leu	Gln	Gly	Leu	Leu	Ser	Cys	Thr	Leu	Pro	Asn	Arg	Asp	Gly

980				985				990							
Asp	Val	Leu	Val	Asp	Ala	Asp	Gly	Lys	Ala	Met	Leu	Phe	Asp	Gly	Arg
995				1000				1005							
Ser	Gly	Glu	Pro	Phe	Pro	Tyr	Pro	Val	Thr	Val	Gly	Tyr	Met	Tyr	Ile
1010				1015				1020							
Met	Lys	Leu	His	His	Leu	Val	Asp	Asp	Lys	Ile	His	Ala	Arg	Ser	Thr
1025				1030				1035				1040			
Gly	Pro	Tyr	Ser	Met	Ile	Thr	Gln	Gln	Pro	Leu	Gly	Gly	Lys	Ala	Gln
				1045				1050				1055			
Phe	Gly	Gly	Gln	Arg	Phe	Gly	Glu	Met	Glu	Cys	Trp	Ala	Met	Gln	Ala
				1060				1065				1070			
Tyr	Gly	Ala	Ala	Tyr	Thr	Leu	Gln	Glu	Leu	Leu	Thr	Ile	Lys	Ser	Asp
				1075				1080				1085			
Asp	Thr	Val	Gly	Arg	Val	Lys	Val	Tyr	Glu	Ala	Ile	Val	Lys	Gly	Glu
				1090				1095				1100			
Asn	Ile	Pro	Glu	Pro	Gly	Ile	Pro	Glu	Ser	Phe	Lys	Val	Leu	Leu	Lys
1105				1110				1115				1120			
Glu	Leu	Gln	Ser	Leu	Cys	Leu	Asn	Val	Glu	Val	Leu	Ser	Ser	Asp	Gly
				1125				1130				1135			
Ala	Ala	Ile	Glu	Leu	Arg	Glu	Gly	Glu	Asp	Glu	Asp	Leu	Glu	Arg	Ala
				1140				1145				1150			
Ala	Ala	Asn	Leu	Gly	Ile	Asn	Leu	Ser	Arg	Asn	Glu	Ser	Ala	Ser	Val
				1155				1160				1165			
Glu	Asp	Leu	Ala												
1170															

<210> 177

<211> 1316

<212> PRT

<213> Mycobacterium tuberculosis

<400> 177

Val	Leu	Asp	Val	Asn	Phe	Phe	Asp	Glu	Leu	Arg	Ile	Gly	Leu	Ala	Thr
1				5					10					15	
Ala	Glu	Asp	Ile	Arg	Gln	Trp	Ser	Tyr	Gly	Glu	Val	Lys	Lys	Pro	Glu
			20				25				30				
Thr	Ile	Asn	Tyr	Arg	Thr	Leu	Lys	Pro	Glu	Lys	Asp	Gly	Leu	Phe	Cys
			35				40				45				
Glu	Lys	Ile	Phe	Gly	Pro	Thr	Arg	Asp	Trp	Glu	Cys	Tyr	Cys	Gly	Lys
			50				55				60				
Tyr	Lys	Arg	Val	Arg	Phe	Lys	Gly	Ile	Ile	Cys	Glu	Arg	Cys	Gly	Val
			65				70				75				80
Glu	Val	Thr	Arg	Ala	Lys	Val	Arg	Arg	Glu	Arg	Met	Gly	His	Ile	Glu
			85				90				95				
Leu	Ala	Ala	Pro	Val	Thr	His	Ile	Trp	Tyr	Phe	Lys	Gly	Val	Pro	Ser
			100				105				110				
Arg	Leu	Gly	Tyr	Leu	Leu	Asp	Leu	Ala	Pro	Lys	Asp	Leu	Glu	Lys	Ile
			115				120				125				
Ile	Tyr	Phe	Ala	Ala	Tyr	Val	Ile	Thr	Ser	Val	Asp	Glu	Glu	Met	Arg
			130				135				140				
His	Asn	Glu	Leu	Ser	Thr	Leu	Glu	Ala	Glu	Met	Ala	Val	Glu	Arg	Lys
			145				150				155				160
Ala	Val	Glu	Asp	Gln	Arg	Asp	Gly	Glu	Leu	Glu	Ala	Arg	Ala	Gln	Lys
			165				170				175				
Leu	Glu	Ala	Asp	Leu	Ala	Glu	Leu	Glu	Ala	Glu	Gly	Ala	Lys	Ala	Asp
			180				185				190				
Ala	Arg	Arg	Lys	Val	Arg	Asp	Gly	Gly	Glu	Arg	Glu	Met	Arg	Gln	Ile

195	200	205
Arg Asp Arg Ala Gln Arg Glu Leu Asp Arg Leu Glu Asp Ile Trp Ser		
210	215	220
Thr Phe Thr Lys Leu Ala Pro Lys Gln Leu Ile Val Asp Glu Asn Leu		
225	230	235
Tyr Arg Glu Leu Val Asp Arg Tyr Gly Glu Tyr Phe Thr Gly Ala Met		
245	250	255
Gly Ala Glu Ser Ile Gln Lys Leu Ile Glu Asn Phe Asp Ile Asp Ala		
260	265	270
Glu Ala Glu Ser Leu Arg Asp Val Ile Arg Asn Gly Lys Gly Gln Lys		
275	280	285
Lys Leu Arg Ala Leu Lys Arg Leu Lys Val Val Ala Ala Phe Gln Gln		
290	295	300
Ser Gly Asn Ser Pro Met Gly Met Val Leu Asp Ala Val Pro Val Ile		
305	310	315
Pro Pro Glu Leu Arg Pro Met Val Gln Leu Asp Gly Gly Arg Phe Ala		
325	330	335
Thr Ser Asp Leu Asn Asp Leu Tyr Arg Arg Val Ile Asn Arg Asn Asn		
340	345	350
Arg Leu Lys Arg Leu Ile Asp Leu Gly Ala Pro Glu Ile Ile Val Asn		
355	360	365
Asn Glu Lys Arg Met Leu Gln Glu Ser Val Asp Ala Leu Phe Asp Asn		
370	375	380
Gly Arg Arg Gly Arg Pro Val Thr Gly Pro Gly Asn Arg Pro Leu Lys		
385	390	395
Ser Leu Ser Asp Leu Leu Lys Gly Lys Gln Gly Arg Phe Arg Gln Asn		
405	410	415
Leu Leu Gly Lys Arg Val Asp Tyr Ser Gly Arg Ser Val Ile Val Val		
420	425	430
Gly Pro Gln Leu Lys Leu His Gln Cys Gly Leu Pro Lys Leu Met Ala		
435	440	445
Leu Glu Leu Phe Lys Pro Phe Val Met Lys Arg Leu Val Asp Leu Asn		
450	455	460
His Ala Gln Asn Ile Lys Ser Ala Lys Arg Met Val Glu Arg Gln Arg		
465	470	475
Pro Gln Val Trp Asp Val Leu Glu Glu Val Ile Ala Glu His Pro Val		
485	490	495
Leu Leu Asn Arg Ala Pro Thr Leu His Arg Leu Gly Ile Gln Ala Phe		
500	505	510
Glu Pro Met Leu Val Glu Gly Lys Ala Ile Gln Leu His Pro Leu Val		
515	520	525
Cys Glu Ala Phe Asn Ala Asp Phe Asp Gly Asp Gln Met Ala Val His		
530	535	540
Leu Pro Leu Ser Ala Glu Ala Gln Ala Glu Ala Arg Ile Leu Met Leu		
545	550	555
Ser Ser Asn Asn Ile Leu Ser Pro Ala Ser Gly Arg Pro Leu Ala Met		
565	570	575
Pro Arg Leu Asp Met Val Thr Gly Leu Tyr Tyr Leu Thr Thr Glu Val		
580	585	590
Pro Gly Asp Thr Gly Glu Tyr Gln Pro Ala Ser Gly Asp His Pro Glu		
595	600	605
Thr Gly Val Tyr Ser Ser Pro Ala Glu Ala Ile Met Ala Ala Asp Arg		
610	615	620
Gly Val Leu Ser Val Arg Ala Lys Ile Lys Val Arg Leu Thr Gln Leu		
625	630	635
Arg Pro Pro Val Glu Ile Glu Ala Glu Leu Phe Gly His Ser Gly Trp		
645	650	655

Gln	Pro	Gly	Asp	Ala	Trp	Met	Ala	Glu	Thr	Thr	Leu	Gly	Arg	Val	Met	660	665	670
Phe	Asn	Glu	Leu	Leu	Pro	Leu	Gly	Tyr	Pro	Phe	Val	Asn	Lys	Gln	Met	675	680	685
His	Lys	Lys	Val	Gln	Ala	Ala	Ile	Ile	Asn	Asp	Leu	Ala	Glu	Arg	Tyr	690	695	700
Pro	Met	Ile	Val	Val	Ala	Gln	Thr	Val	Asp	Lys	Leu	Lys	Asp	Ala	Gly	705	710	715
Phe	Tyr	Trp	Ala	Thr	Arg	Ser	Gly	Val	Thr	Val	Ser	Met	Ala	Asp	Val	725	730	735
Leu	Val	Pro	Pro	Arg	Lys	Lys	Glu	Ile	Leu	Asp	His	Tyr	Glu	Glu	Arg	740	745	750
Ala	Asp	Lys	Val	Glu	Lys	Gln	Phe	Gln	Arg	Gly	Ala	Leu	Asn	His	Asp	755	760	765
Glu	Arg	Asn	Glu	Ala	Leu	Val	Glu	Ile	Trp	Lys	Glu	Ala	Thr	Asp	Glu	770	775	780
Val	Gly	Gln	Ala	Leu	Arg	Glu	His	Tyr	Pro	Asp	Asp	Asn	Pro	Ile	Ile	785	790	795
Thr	Ile	Val	Asp	Ser	Gly	Ala	Thr	Gly	Asn	Phe	Thr	Gln	Thr	Arg	Thr	805	810	815
Leu	Ala	Gly	Met	Lys	Gly	Leu	Val	Thr	Asn	Pro	Lys	Gly	Glu	Phe	Ile	820	825	830
Pro	Arg	Pro	Val	Lys	Ser	Ser	Phe	Arg	Glu	Gly	Leu	Thr	Val	Leu	Glu	835	840	845
Tyr	Phe	Ile	Asn	Thr	His	Gly	Ala	Arg	Lys	Gly	Leu	Ala	Asp	Thr	Ala	850	855	860
Leu	Arg	Thr	Ala	Asp	Ser	Gly	Tyr	Leu	Thr	Arg	Arg	Leu	Val	Asp	Val	865	870	875
Ser	Gln	Asp	Val	Ile	Val	Arg	Glu	His	Asp	Cys	Gln	Thr	Glu	Arg	Gly	885	890	895
Ile	Val	Val	Glu	Leu	Ala	Glu	Arg	Ala	Pro	Asp	Gly	Thr	Leu	Ile	Arg	900	905	910
Asp	Pro	Tyr	Ile	Glu	Thr	Ser	Ala	Tyr	Ala	Arg	Thr	Leu	Gly	Thr	Asp	915	920	925
Ala	Val	Asp	Glu	Ala	Gly	Asn	Val	Ile	Val	Glu	Arg	Gly	Gln	Asp	Leu	930	935	940
Gly	Asp	Pro	Glu	Ile	Asp	Ala	Leu	Leu	Ala	Ala	Gly	Ile	Thr	Gln	Val	945	950	955
Lys	Val	Arg	Ser	Val	Leu	Thr	Cys	Ala	Thr	Ser	Thr	Gly	Val	Cys	Ala	965	970	975
Thr	Cys	Tyr	Gly	Arg	Ser	Met	Ala	Thr	Gly	Lys	Leu	Val	Asp	Ile	Gly	980	985	990
Glu	Ala	Val	Gly	Ile	Val	Ala	Ala	Gln	Ser	Ile	Gly	Glu	Pro	Gly	Thr	995	1000	1005
Gln	Leu	Thr	Met	Arg	Thr	Phe	His	Gln	Gly	Gly	Val	Gly	Glu	Asp	Ile	1010	1015	1020
Thr	Gly	Gly	Leu	Pro	Arg	Val	Gln	Glu	Leu	Phe	Glu	Ala	Arg	Val	Pro	1025	1030	1035
Arg	Gly	Lys	Ala	Pro	Ile	Ala	Asp	Val	Thr	Gly	Arg	Val	Arg	Leu	Glu	1045	1050	1055
Asp	Gly	Glu	Arg	Phe	Tyr	Lys	Ile	Thr	Ile	Val	Pro	Asp	Asp	Gly	Gly	1060	1065	1070
Glu	Glu	Val	Val	Tyr	Asp	Lys	Ile	Ser	Lys	Arg	Gln	Arg	Leu	Arg	Val	1075	1080	1085
Phe	Lys	His	Glu	Asp	Gly	Ser	Glu	Arg	Val	Leu	Ser	Asp	Gly	Asp	His	1090	1095	1100
Val	Glu	Val	Gly	Gln	Gln	Leu	Met	Glu	Gly	Ser	Ala	Asp	Pro	His	Glu			

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1105          1110          1115          1120
Val Leu Arg Val Gln Gly Pro Arg Glu Val Gln Ile His Leu Val Arg
          1125          1130          1135
Glu Val Gln Glu Val Tyr Arg Ala Gln Gly Val Ser Ile His Asp Lys
          1140          1145          1150
His Ile Glu Val Ile Val Arg Gln Met Leu Arg Arg Val Thr Ile Ile
          1155          1160          1165
Asp Ser Gly Ser Thr Glu Phe Leu Pro Gly Ser Leu Ile Asp Arg Ala
          1170          1175          1180
Glu Phe Glu Ala Glu Asn Arg Arg Val Val Ala Glu Gly Gly Glu Pro
1185          1190          1195          1200
Ala Ala Gly Arg Pro Val Leu Met Gly Ile Thr Lys Ala Ser Leu Ala
          1205          1210          1215
Thr Asp Ser Trp Leu Ser Ala Ala Ser Phe Gln Glu Thr Thr Arg Val
          1220          1225          1230
Leu Thr Asp Ala Ala Ile Asn Cys Arg Ser Asp Lys Leu Asn Gly Leu
          1235          1240          1245
Lys Glu Asn Val Ile Ile Gly Lys Leu Ile Pro Ala Gly Thr Gly Ile
          1250          1255          1260
Asn Arg Tyr Arg Asn Ile Ala Val Gln Pro Thr Glu Glu Ala Arg Ala
1265          1270          1275          1280
Ala Ala Tyr Thr Ile Pro Ser Tyr Glu Asp Gln Tyr Tyr Ser Pro Asp
          1285          1290          1295
Phe Gly Ala Ala Thr Gly Ala Ala Val Pro Leu Asp Asp Tyr Gly Tyr
          1300          1305          1310
Ser Asp Tyr Arg
          1315

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<210> 178

<211> 787

<212> PRT

<213> Mycobacterium tuberculosis

<400> 178

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Met Ala Pro Glu Ala Thr Glu Ala Phe Asn Gly Thr Ile Glu Leu Asp
1      5      10      15
Ile Arg Asp Ser Glu Pro Asp Trp Gly Pro Tyr Ala Ala Pro Val Ala
          20      25      30
Pro Glu His Ser Pro Asn Ile Leu Val Trp Asp Asp Val Gly
          35      40      45
Ile Ala Thr Trp Asp Cys Phe Gly Gly Leu Val Glu Met Pro Ala Met
          50      55      60
Thr Arg Val Ala Glu Arg Gly Val Arg Leu Ser Gln Phe His Thr Thr
65      70      75      80
Ala Leu Cys Ser Pro Thr Arg Ala Ser Leu Leu Thr Gly Arg Asn Ala
          85      90      95
Thr Thr Val Gly Met Ala Thr Ile Glu Glu Phe Thr Asp Gly Phe Pro
          100     105     110
Asn Cys Asn Gly Arg Ile Pro Ala Asp Thr Ala Leu Leu Pro Glu Val
          115     120     125
Leu Ala Glu His Gly Tyr Asn Thr Tyr Cys Val Gly Lys Trp His Leu
          130     135     140
Thr Pro Leu Glu Glu Ser Asn Met Ala Ser Thr Lys Arg His Trp Pro
145     150     155     160
Thr Ser Arg Gly Phe Glu Arg Phe Tyr Gly Phe Leu Gly Gly Glu Thr
          165     170     175
Asp Gln Trp Tyr Pro Asp Leu Val Tyr Asp Asn His Pro Val Ser Pro

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			180				185				190				
Pro	Gly	Thr	Pro	Glu	Gly	Gly	Tyr	His	Leu	Ser	Lys	Asp	Ile	Ala	Asp
			195				200				205				
Lys	Thr	Ile	Glu	Phe	Ile	Arg	Asp	Ala	Lys	Val	Ile	Ala	Pro	Asp	Lys
			210				215				220				
Pro	Trp	Phe	Ser	Tyr	Val	Cys	Pro	Gly	Ala	Gly	His	Ala	Pro	His	His
225				230				235				240			
Val	Phe	Lys	Glu	Trp	Ala	Asp	Arg	Tyr	Ala	Gly	Arg	Phe	Asp	Met	Gly
			245				250				255				
Tyr	Glu	Arg	Tyr	Arg	Glu	Ile	Val	Leu	Glu	Arg	Gln	Lys	Ala	Leu	Gly
			260				265				270				
Ile	Val	Pro	Pro	Asp	Thr	Glu	Leu	Ser	Pro	Ile	Asn	Pro	Tyr	Leu	Asp
			275				280				285				
Val	Pro	Gly	Pro	Asn	Gly	Glu	Thr	Trp	Pro	Leu	Gln	Asp	Thr	Val	Arg
			290				295				300				
Pro	Trp	Asp	Ser	Leu	Ser	Asp	Glu	Glu	Lys	Lys	Leu	Phe	Cys	Arg	Met
305				310				315				320			
Ala	Glu	Val	Phe	Ala	Gly	Phe	Leu	Ser	Tyr	Thr	Asp	Ala	Gln	Ile	Gly
			325				330				335				
Arg	Ile	Leu	Asp	Tyr	Leu	Glu	Glu	Ser	Gly	Gln	Leu	Asp	Asn	Thr	Ile
			340				345				350				
Ile	Val	Val	Ile	Ser	Asp	Asn	Gly	Ala	Ser	Gly	Glu	Gly	Gly	Pro	Asn
			355				360				365				
Gly	Ser	Val	Asn	Glu	Gly	Lys	Phe	Phe	Asn	Gly	Tyr	Ile	Asp	Thr	Val
			370				375				380				
Ala	Glu	Ser	Met	Lys	Leu	Phe	Asp	His	Leu	Gly	Gly	Pro	Gln	Thr	Tyr
385				390				395				400			
Asn	His	Tyr	Pro	Ile	Gly	Trp	Ala	Met	Ala	Phe	Asn	Thr	Pro	Tyr	Lys
			405				410				415				
Leu	Phe	Lys	Arg	Tyr	Ala	Ser	His	Glu	Gly	Gly	Ile	Ala	Asp	Pro	Ala
			420				425				430				
Ile	Ile	Ser	Trp	Pro	Asn	Gly	Ile	Ala	Ala	His	Gly	Glu	Ile	Arg	Asp
			435				440				445				
Asn	Tyr	Val	Asn	Val	Ser	Asp	Ile	Thr	Pro	Thr	Val	Tyr	Asp	Leu	Leu
			450				455				460				
Gly	Met	Thr	Pro	Pro	Gly	Thr	Val	Lys	Gly	Ile	Pro	Gln	Lys	Pro	Met
465				470				475				480			
Asp	Gly	Val	Ser	Phe	Ile	Ala	Ala	Leu	Ala	Asp	Pro	Ala	Ala	Asp	Thr
			485				490				495				
Gly	Lys	Thr	Thr	Gln	Phe	Tyr	Thr	Met	Leu	Gly	Thr	Arg	Gly	Ile	Trp
			500				505				510				
His	Glu	Gly	Trp	Phe	Ala	Asn	Thr	Ile	His	Ala	Ala	Thr	Pro	Ala	Gly
			515				520				525				
Trp	Ser	Asn	Phe	Asn	Ala	Asp	Arg	Trp	Glu	Leu	Phe	His	Ile	Ala	Ala
			530				535				540				
Asp	Arg	Ser	Gln	Cys	His	Asp	Leu	Ala	Ala	Glu	His	Pro	Asp	Lys	Leu
545				550				555				560			
Glu	Glu	Leu	Lys	Ala	Leu	Trp	Phe	Ser	Glu	Ala	Ala	Lys	Tyr	Asn	Gly
			565				570				575				
Leu	Pro	Leu	Ala	Asp	Leu	Asn	Leu	Leu	Glu	Thr	Met	Thr	Arg	Ser	Arg
			580				585				590				
Pro	Tyr	Leu	Val	Ser	Glu	Arg	Ala	Ser	Tyr	Val	Tyr	Tyr	Pro	Asp	Cys
			595				600				605				
Ala	Asp	Val	Gly	Ile	Gly	Ala	Ala	Val	Glu	Ile	Arg	Gly	Arg	Ser	Phe
			610				615								

Leu Phe Lys His Gly Gly Ala His Gly Gly His Val Leu Phe Val Arg
 645 650 655
 Asp Gly Arg Leu His Tyr Val Tyr Asn Phe Leu Gly Glu Arg Gln Gln
 660 665 670
 Leu Val Ser Ser Ser Gly Pro Val Pro Ser Gly Arg His Leu Leu Gly
 675 680 685
 Val Arg Tyr Leu Arg Thr Gly Thr Val Pro Asn Ser His Thr Pro Val
 690 695 700
 Gly Asp Leu Glu Leu Phe Phe Asp Glu Asn Leu Val Gly Ala Leu Thr
 705 710 715 720
 Asn Val Leu Thr His Pro Gly Thr Phe Gly Leu Ala Gly Ala Ala Ile
 725 730 735
 Ser Val Gly Arg Asn Gly Gly Ser Ala Val Ser Ser His Tyr Glu Ala
 740 745 750
 Pro Phe Ala Phe Thr Gly Gly Thr Ile Thr Gln Val Thr Val Asp Val
 755 760 765
 Ser Gly Arg Pro Phe Glu Asp Val Glu Ser Asp Leu Ala Leu Ala Phe
 770 775 780
 Ser Arg Asp
 785

<210> 179

<211> 451

<212> PRT

<213> Mycobacterium tuberculosis

<400> 179

Met Ser Ala Val Ala Leu Pro Arg Val Ser Gly Gly His Asp Glu His
 1 5 10 15
 Gly His Leu Glu Glu Phe Arg Thr Asp Pro Ile Gly Leu Met Gln Arg
 20 25 30
 Val Arg Asp Glu Cys Gly Asp Val Gly Thr Phe Gln Leu Ala Gly Lys
 35 40 45
 Gln Val Val Leu Leu Ser Gly Ser His Ala Asn Glu Phe Phe Phe Arg
 50 55 60
 Ala Gly Asp Asp Asp Leu Asp Gln Ala Lys Ala Tyr Pro Phe Met Thr
 65 70 75 80
 Pro Ile Phe Gly Glu Gly Val Val Phe Asp Ala Ser Pro Glu Arg Arg
 85 90 95
 Lys Glu Met Leu His Asn Ala Ala Leu Arg Gly Glu Gln Met Lys Gly
 100 105 110
 His Ala Ala Thr Ile Glu Asp Gln Val Arg Arg Met Ile Ala Asp Trp
 115 120 125
 Gly Glu Ala Gly Glu Ile Asp Leu Leu Asp Phe Phe Ala Glu Leu Thr
 130 135 140
 Ile Tyr Thr Ser Ser Ala Cys Leu Ile Gly Lys Lys Phe Arg Asp Gln
 145 150 155 160
 Leu Asp Gly Arg Phe Ala Lys Leu Tyr His Glu Leu Glu Arg Gly Thr
 165 170 175
 Asp Pro Leu Ala Tyr Val Asp Pro Tyr Leu Pro Ile Glu Ser Phe Arg
 180 185 190
 Arg Arg Asp Glu Ala Arg Asn Gly Leu Val Ala Leu Val Ala Asp Ile
 195 200 205
 Met Asn Gly Arg Ile Ala Asn Pro Pro Thr Asp Lys Ser Asp Arg Asp
 210 215 220
 Met Leu Asp Val Leu Ile Ala Val Lys Ala Glu Thr Gly Thr Pro Arg
 225 230 235 240

Phe Ser Ala Asp Glu Ile Thr Gly Met Phe Ile Ser Met Met Phe Ala
 245 250 255
 Gly His His Thr Ser Ser Gly Thr Ala Ser Trp Thr Leu Ile Glu Leu
 260 265 270
 Met Arg His Arg Asp Ala Tyr Ala Ala Val Ile Asp Glu Leu Asp Glu
 275 280 285
 Leu Tyr Gly Asp Gly Arg Ser Val Ser Phe His Ala Leu Arg Gln Ile
 290 295 300
 Pro Gln Leu Glu Asn Val Leu Lys Glu Thr Leu Arg Leu His Pro Pro
 305 310 315 320
 Leu Ile Ile Leu Met Arg Val Ala Lys Gly Glu Phe Glu Val Gln Gly
 325 330 335
 His Arg Ile His Glu Gly Asp Leu Val Ala Ala Ser Pro Ala Ile Ser
 340 345 350
 Asn Arg Ile Pro Glu Asp Phe Pro Asp Pro His Asp Phe Val Pro Ala
 355 360 365
 Arg Tyr Glu Gln Pro Arg Gln Glu Asp Leu Leu Asn Arg Trp Thr Trp
 370 375 380
 Ile Pro Phe Gly Ala Gly Arg His Arg Cys Val Gly Ala Ala Phe Ala
 385 390 395 400
 Ile Met Gln Ile Lys Ala Ile Phe Ser Val Leu Leu Arg Glu Tyr Glu
 405 410 415
 Phe Glu Met Ala Gln Pro Pro Glu Ser Tyr Arg Asn Asp His Ser Lys
 420 425 430
 Met Val Val Gln Leu Ala Gln Pro Ala Cys Val Arg Tyr Arg Arg Arg
 435 440 445
 Thr Gly Val
 450

<210> 180

<211> 542

<212> PRT

<213> Mycobacterium tuberculosis

<400> 180

Val Gln Ser Asp Lys Thr Val Leu Leu Glu Val Asp His Glu Leu Ala
 1 5 10 15
 Gly Ala Ala Arg Ala Ala Ile Ala Pro Phe Ala Glu Leu Glu Arg Ala
 20 25 30
 Pro Glu His Val His Thr Tyr Arg Ile Thr Pro Leu Ala Leu Trp Asn
 35 40 45
 Ala Arg Ala Ala Gly His Asp Ala Glu Gln Val Val Asp Ala Leu Val
 50 55 60
 Ser Tyr Ser Arg Tyr Ala Val Pro Gln Pro Leu Leu Val Asp Ile Val
 65 70 75 80
 Asp Thr Met Ala Arg Tyr Gly Arg Leu Gln Leu Val Lys Asn Pro Ala
 85 90 95
 His Gly Leu Thr Leu Val Ser Leu Asp Arg Ala Val Leu Glu Glu Val
 100 105 110
 Leu Arg Asn Lys Lys Ile Ala Pro Met Leu Gly Ala Arg Ile Asp Asp
 115 120 125
 Asp Thr Val Val Val His Pro Ser Glu Arg Gly Arg Val Lys Gln Leu
 130 135 140
 Leu Leu Lys Ile Gly Trp Pro Ala Glu Asp Leu Ala Gly Tyr Val Asp
 145 150 155 160
 Gly Glu Ala His Pro Ile Ser Leu His Gln Glu Gly Trp Gln Leu Arg
 165 170 175

```

Asp Tyr Gln Arg Leu Ala Ala Asp Ser Phe Trp Ala Gly Gly Ser Gly
      180      185      190
Val Val Val Leu Pro Cys Gly Ala Gly Lys Thr Leu Val Gly Ala Ala
      195      200      205
Ala Met Ala Lys Ala Gly Ala Thr Thr Leu Ile Leu Val Thr Asn Ile
      210      215      220
Val Ala Ala Arg Gln Trp Lys Arg Glu Leu Val Ala Arg Thr Ser Leu
225      230      235      240
Thr Glu Asn Glu Ile Gly Glu Phe Ser Gly Glu Arg Lys Glu Ile Arg
      245      250      255
Pro Val Thr Ile Ser Thr Tyr Gln Met Ile Thr Arg Arg Thr Lys Gly
      260      265      270
Glu Tyr Arg His Leu Glu Leu Phe Asp Ser Arg Asp Trp Gly Leu Ile
      275      280      285
Ile Tyr Asp Glu Val His Leu Leu Pro Ala Pro Val Phe Arg Met Thr
      290      295      300
Ala Asp Leu Gln Ser Lys Arg Arg Leu Gly Leu Thr Ala Thr Leu Ile
305      310      315      320
Arg Glu Asp Gly Arg Glu Gly Asp Val Phe Ser Leu Ile Gly Pro Lys
      325      330      335
Arg Tyr Asp Ala Pro Trp Lys Asp Ile Glu Ala Gln Gly Trp Ile Ala
      340      345      350
Pro Ala Glu Cys Val Glu Val Arg Val Thr Met Thr Asp Ser Glu Arg
      355      360      365
Met Met Tyr Ala Thr Ala Glu Pro Glu Glu Arg Tyr Arg Ile Cys Ser
370      375      380
Thr Val His Thr Lys Ile Ala Val Val Lys Ser Ile Leu Ala Lys His
385      390      395      400
Pro Asp Glu Gln Thr Leu Val Ile Gly Ala Tyr Leu Asp Gln Leu Asp
      405      410      415
Glu Leu Gly Ala Glu Leu Gly Ala Pro Val Ile Gln Gly Ser Thr Arg
      420      425      430
Thr Ser Glu Arg Glu Ala Leu Phe Asp Ala Phe Arg Arg Gly Glu Val
      435      440      445
Ala Thr Leu Val Val Ser Lys Val Ala Asn Phe Ser Ile Asp Leu Pro
      450      455      460
Glu Ala Ala Val Ala Val Gln Val Ser Gly Thr Phe Gly Ser Arg Gln
465      470      475      480
Glu Glu Ala Gln Arg Leu Gly Arg Ile Leu Arg Pro Lys Ala Asp Gly
      485      490      495
Gly Gly Ala Ile Phe Tyr Ser Val Val Ala Arg Asp Ser Leu Asp Ala
      500      505      510
Glu Tyr Ala Ala His Arg Gln Arg Phe Leu Ala Glu Gln Gly Tyr Gly
      515      520      525
Tyr Ile Ile Arg Asp Ala Asp Asp Leu Leu Gly Pro Ala Ile
      530      535      540

```

<210> 181

<211> 495

<212> PRT

<213> Mycobacterium tuberculosis

<400> 181

```

Val Ser Arg Ile Thr Thr Asp Gln Leu Arg His Ala Val Leu Asp Arg
1      5      10      15
Gly Ser Phe Val Ser Trp Asp Ser Glu Pro Leu Ala Val Pro Val Ala
      20      25      30

```

Asp	Ser	Tyr	Ala	Arg	Glu	Leu	Ala	Ala	Ala	Arg	Ala	Ala	Thr	Gly	Ala
		35					40					45			
Asp	Glu	Ser	Val	Gln	Thr	Gly	Glu	Gly	Arg	Val	Phe	Gly	Arg	Arg	Val
	50					55					60				
Ala	Val	Val	Ala	Cys	Glu	Phe	Asp	Phe	Leu	Gly	Gly	Ser	Ile	Gly	Val
65					70					75					80
Ala	Ala	Ala	Glu	Arg	Ile	Thr	Ala	Ala	Val	Glu	Arg	Ala	Thr	Ala	Glu
				85					90					95	
Arg	Leu	Pro	Leu	Leu	Ala	Ser	Pro	Ser	Ser	Gly	Gly	Thr	Arg	Met	Gln
		100						105					110		
Glu	Gly	Thr	Val	Ala	Phe	Leu	Gln	Met	Val	Lys	Ile	Ala	Ala	Ala	Ile
		115					120					125			
Gln	Leu	His	Asn	Gln	Ala	Arg	Leu	Pro	Tyr	Leu	Val	Tyr	Leu	Arg	His
	130					135					140				
Pro	Thr	Thr	Gly	Gly	Val	Phe	Ala	Ser	Trp	Gly	Ser	Leu	Gly	His	Leu
145					150					155					160
Thr	Val	Ala	Glu	Pro	Gly	Ala	Leu	Ile	Gly	Phe	Leu	Gly	Pro	Arg	Val
				165					170					175	
Tyr	Glu	Leu	Leu	Tyr	Gly	Asp	Pro	Phe	Pro	Ser	Gly	Val	Gln	Thr	Ala
		180						185					190		
Glu	Asn	Leu	Arg	Arg	His	Gly	Ile	Ile	Asp	Gly	Val	Val	Ala	Leu	Asp
	195					200					205				
Arg	Leu	Arg	Pro	Met	Leu	Asp	Arg	Ala	Leu	Thr	Val	Leu	Ile	Asp	Ala
	210					215					220				
Pro	Glu	Pro	Leu	Pro	Ala	Pro	Gln	Thr	Pro	Ala	Pro	Val	Pro	Asp	Val
225					230					235					240
Pro	Thr	Trp	Asp	Ser	Val	Val	Ala	Ser	Arg	Arg	Pro	Asp	Arg	Pro	Gly
			245						250					255	
Val	Arg	Gln	Leu	Leu	Arg	His	Gly	Ala	Thr	Asp	Arg	Val	Leu	Leu	Ser
		260						265					270		
Gly	Thr	Asp	Gln	Gly	Glu	Ala	Ala	Thr	Thr	Leu	Leu	Ala	Leu	Ala	Arg
		275					280					285			
Phe	Gly	Gly	Gln	Pro	Thr	Val	Val	Leu	Gly	Gln	Gln	Arg	Ala	Val	Gly
	290					295					300				
Gly	Gly	Gly	Ser	Thr	Val	Gly	Pro	Ala	Ala	Leu	Arg	Glu	Ala	Arg	Arg
305					310					315					320
Gly	Met	Ala	Leu	Ala	Ala	Glu	Leu	Cys	Leu	Pro	Leu	Val	Leu	Val	Ile
			325						330					335	
Asp	Ala	Ala	Gly	Pro	Ala	Leu	Ser	Ala	Ala	Ala	Glu	Gln	Gly	Gly	Leu
			340					345					350		
Ala	Gly	Gln	Ile	Ala	His	Cys	Leu	Ala	Glu	Leu	Val	Thr	Leu	Asp	Thr
		355					360					365			
Pro	Thr	Val	Ser	Ile	Leu	Leu	Gly	Gln	Gly	Ser	Gly	Gly	Pro	Ala	Leu
	370					375					380				
Ala	Met	Leu	Pro	Ala	Asp	Arg	Val	Leu	Ala	Ala	Leu	His	Gly	Trp	Leu
385					390					395					400
Ala	Pro	Leu	Pro	Pro	Glu	Gly	Ala	Ser	Ala	Ile	Val	Phe	Arg	Asp	Thr
				405					410					415	
Ala	His	Ala	Ala	Glu	Leu	Ala	Ala	Ala	Gln	Gly	Ile	Arg	Ser	Ala	Asp
			420					425					430		
Leu	Leu	Lys	Ser	Gly	Ile	Val	Asp	Thr	Ile	Val	Pro	Glu	Tyr	Pro	Asp
	435						440					445			
Ala	Ala	Asp	Glu	Pro	Ile	Glu	Phe	Ala	Leu	Arg	Leu	Ser	Asn	Ala	Ile
	450					455					460				
Ala	Ala	Glu	Val	His	Ala	Leu	Arg	Lys	Ile	Pro	Ala	Pro	Glu	Arg	Leu
465					470					475					480
Ala	Thr	Arg	Leu	Gln	Arg	Tyr	Arg	Arg	Ile	Gly	Leu	Pro	Arg	Asp	

485

490

495

<210> 182

<211> 464

<212> PRT

<213> Mycobacterium tuberculosis

<400> 182

Met	Ala	Lys	Leu	Ala	Arg	Val	Val	Gly	Leu	Val	Gln	Glu	Glu	Gln	Pro
1				5					10					15	
Ser	Asp	Met	Thr	Asn	His	Pro	Arg	Tyr	Ser	Pro	Pro	Pro	Gln	Gln	Pro
			20					25					30		
Gly	Thr	Pro	Gly	Tyr	Ala	Gln	Gly	Gln	Gln	Gln	Thr	Tyr	Ser	Gln	Gln
		35					40					45			
Phe	Asp	Trp	Arg	Tyr	Pro	Pro	Ser	Pro	Pro	Pro	Gln	Pro	Thr	Gln	Tyr
	50					55					60				
Arg	Gln	Pro	Tyr	Glu	Ala	Leu	Gly	Gly	Thr	Arg	Pro	Gly	Leu	Ile	Pro
65					70					75					80
Gly	Val	Ile	Pro	Thr	Met	Thr	Pro	Pro	Pro	Gly	Met	Val	Arg	Gln	Arg
				85					90					95	
Pro	Arg	Ala	Gly	Met	Leu	Ala	Ile	Gly	Ala	Val	Thr	Ile	Ala	Val	Val
			100					105					110		
Ser	Ala	Gly	Ile	Gly	Gly	Ala	Ala	Ala	Ser	Leu	Val	Gly	Phe	Asn	Arg
	115					120						125			
Ala	Pro	Ala	Gly	Pro	Ser	Gly	Gly	Pro	Val	Ala	Ala	Ser	Ala	Ala	Pro
	130					135					140				
Ser	Ile	Pro	Ala	Ala	Asn	Met	Pro	Pro	Gly	Ser	Val	Glu	Gln	Val	Ala
145					150					155					160
Ala	Lys	Val	Val	Pro	Ser	Val	Val	Met	Leu	Glu	Thr	Asp	Leu	Gly	Arg
				165					170					175	
Gln	Ser	Glu	Glu	Gly	Ser	Gly	Ile	Ile	Leu	Ser	Ala	Glu	Gly	Leu	Ile
			180					185					190		
Leu	Thr	Asn	Asn	His	Val	Ile	Ala	Ala	Ala	Ala	Lys	Pro	Pro	Leu	Gly
		195					200					205			
Ser	Pro	Pro	Pro	Lys	Thr	Thr	Val	Thr	Phe	Ser	Asp	Gly	Arg	Thr	Ala
	210					215					220				
Pro	Phe	Thr	Val	Val	Gly	Ala	Asp	Pro	Thr	Ser	Asp	Ile	Ala	Val	Val
225					230					235					240
Arg	Val	Gln	Gly	Val	Ser	Gly	Leu	Thr	Pro	Ile	Ser	Leu	Gly	Ser	Ser
			245						250					255	
Ser	Asp	Leu	Arg	Val	Gly	Gln	Pro	Val	Leu	Ala	Ile	Gly	Ser	Pro	Leu
		260						265					270		
Gly	Leu	Glu	Gly	Thr	Val	Thr	Thr	Gly	Ile	Val	Ser	Ala	Leu	Asn	Arg
		275					280					285			
Pro	Val	Ser	Thr	Thr	Gly	Glu	Ala	Gly	Asn	Gln	Asn	Thr	Val	Leu	Asp
	290					295					300				
Ala	Ile	Gln	Thr	Asp	Ala	Ala	Ile	Asn	Pro	Gly	Asn	Ser	Gly	Gly	Ala
305					310					315					320
Leu	Val	Asn	Met	Asn	Ala	Gln	Leu	Val	Gly	Val	Asn	Ser	Ala	Ile	Ala
			325						330					335	
Thr	Leu	Gly	Ala	Asp	Ser	Ala	Asp	Ala	Gln	Ser	Gly	Ser	Ile	Gly	Leu
		340					345						350		
Gly	Phe	Ala	Ile	Pro	Val	Asp	Gln	Ala	Lys	Arg	Ile	Ala	Asp	Glu	Leu
	355					360						365			
Ile	Ser	Thr	Gly	Lys	Ala	Ser	His	Ala	Ser	Leu	Gly	Val	Gln	Val	Thr
	370					375					380				
Asn	Asp	Lys	Asp	Thr	Leu	Gly	Ala	Lys	Ile	Val	Glu	Val	Val	Ala	Gly


```

385          390          395          400
Gly Ala Ala Ala Asn Ala Gly Val Pro Lys Gly Val Val Val Thr Lys
          405          410          415
Val Asp Asp Arg Pro Ile Asn Ser Ala Asp Ala Leu Val Ala Ala Val
          420          425          430
Arg Ser Lys Ala Pro Gly Ala Thr Val Ala Leu Thr Phe Gln Asp Pro
          435          440          445
Ser Gly Gly Ser Arg Thr Val Gln Val Thr Leu Gly Lys Ala Glu Gln
          450          455          460

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```

<210> 183
<211> 264
<212> PRT
<213> Mycobacterium tuberculosis

```

```

<400> 183
Leu Val Asp Ala His Thr His Leu Asp Ala Cys Gly Ala Arg Asp Ala
 1          5          10          15
Asp Thr Val Arg Ser Leu Val Glu Arg Ala Ala Ala Ala Gly Val Thr
          20          25          30
Ala Val Val Thr Val Ala Asp Asp Leu Glu Ser Ala Arg Trp Val Thr
          35          40          45
Arg Ala Ala Glu Trp Asp Arg Arg Val Tyr Ala Ala Val Ala Leu His
          50          55          60
Pro Thr Arg Ala Asp Ala Leu Thr Asp Ala Ala Arg Ala Glu Leu Glu
          65          70          75          80
Arg Leu Val Ala His Pro Arg Val Val Ala Val Gly Glu Thr Gly Ile
          85          90          95
Asp Met Tyr Trp Pro Gly Arg Leu Asp Gly Cys Ala Glu Pro His Val
          100          105          110
Gln Arg Glu Ala Phe Ala Trp His Ile Asp Leu Ala Lys Arg Thr Gly
          115          120          125
Lys Pro Leu Met Ile His Asn Arg Gln Ala Asp Arg Asp Val Leu Asp
          130          135          140
Val Leu Arg Ala Glu Gly Ala Pro Asp Thr Val Ile Leu His Cys Phe
          145          150          155          160
Ser Ser Asp Ala Ala Met Ala Arg Thr Cys Val Asp Ala Gly Trp Leu
          165          170          175
Leu Ser Leu Ser Gly Thr Val Ser Phe Arg Thr Ala Arg Glu Leu Arg
          180          185          190
Glu Ala Val Pro Leu Met Pro Val Glu Gln Leu Leu Val Glu Thr Asp
          195          200          205
Ala Pro Tyr Leu Thr Pro His Pro His Arg Gly Leu Ala Asn Glu Pro
          210          215          220
Tyr Cys Leu Pro Tyr Thr Val Arg Ala Leu Ala Glu Leu Val Asn Arg
          225          230          235          240
Arg Pro Glu Glu Val Ala Leu Ile Thr Thr Ser Asn Ala Arg Arg Ala
          245          250          255
Tyr Gly Leu Gly Trp Met Arg Gln
          260

```

```

<210> 184
<211> 362
<212> PRT
<213> Mycobacterium tuberculosis

```

```

<400> 184

```

```

Met Leu Arg Leu Val Val Gly Ala Leu Leu Leu Val Leu Ala Phe Ala
 1      5      10      15
Gly Gly Tyr Ala Val Ala Ala Cys Lys Thr Val Thr Leu Thr Val Asp
      20      25      30
Gly Thr Ala Met Arg Val Thr Thr Met Lys Ser Arg Val Ile Asp Ile
      35      40      45
Val Glu Glu Asn Gly Phe Ser Val Asp Asp Arg Asp Asp Leu Tyr Pro
      50      55      60
Ala Ala Gly Val Gln Val His Asp Ala Asp Thr Ile Val Leu Arg Arg
      65      70      75      80
Ser Arg Pro Leu Gln Ile Ser Leu Asp Gly His Asp Ala Lys Gln Val
      85      90      95
Trp Thr Thr Ala Ser Thr Val Asp Glu Ala Leu Ala Gln Leu Ala Met
      100      105      110
Thr Asp Thr Ala Pro Ala Ala Ala Ser Arg Ala Ser Arg Val Pro Leu
      115      120      125
Ser Gly Met Ala Leu Pro Val Val Ser Ala Lys Thr Val Gln Leu Asn
      130      135      140
Asp Gly Gly Leu Val Arg Thr Val His Leu Pro Ala Pro Asn Val Ala
      145      150      155      160
Gly Leu Leu Ser Ala Ala Gly Val Pro Leu Leu Gln Ser Asp His Val
      165      170      175
Val Pro Ala Ala Thr Ala Pro Ile Val Glu Gly Met Gln Ile Gln Val
      180      185      190
Thr Arg Asn Arg Ile Lys Lys Val Thr Glu Arg Leu Pro Leu Pro Pro
      195      200      205
Asn Ala Arg Arg Val Glu Asp Pro Glu Met Asn Met Ser Arg Glu Val
      210      215      220
Val Glu Asp Pro Gly Val Pro Gly Thr Gln Asp Val Thr Phe Ala Val
      225      230      235      240
Ala Glu Val Asn Gly Val Glu Thr Gly Arg Leu Pro Val Ala Asn Val
      245      250      255
Val Val Thr Pro Ala His Glu Ala Val Val Arg Val Gly Thr Lys Pro
      260      265      270
Gly Thr Glu Val Pro Pro Val Ile Asp Gly Ser Ile Trp Asp Ala Ile
      275      280      285
Ala Gly Cys Glu Ala Gly Gly Asn Trp Ala Ile Asn Thr Gly Asn Gly
      290      295      300
Tyr Tyr Gly Gly Val Gln Phe Asp Gln Gly Thr Trp Glu Ala Asn Gly
      305      310      315      320
Gly Leu Arg Tyr Ala Pro Arg Ala Asp Leu Ala Thr Arg Glu Glu Gln
      325      330      335
Ile Ala Val Ala Glu Val Thr Arg Leu Arg Gln Gly Trp Gly Ala Trp
      340      345      350
Pro Val Cys Ala Ala Arg Ala Gly Ala Arg
      355      360

```

<210> 185

<211> 317

<212> PRT

<213> Mycobacterium tuberculosis

<400> 185

```

Met Cys Cys Thr Ser Gly Cys Ala Leu Thr Ile Arg Leu Leu Gly Arg
 1      5      10      15
Thr Glu Ile Arg Arg Leu Ala Lys Glu Leu Asp Phe Arg Pro Arg Lys
      20      25      30

```

```

Ser Leu Gly Gln Asn Phe Val His Asp Ala Asn Thr Val Arg Arg Val
   35              40              45
Val Ala Ala Ser Gly Val Ser Arg Ser Asp Leu Val Leu Glu Val Gly
   50              55              60
Pro Gly Leu Gly Ser Leu Thr Leu Ala Leu Leu Asp Arg Gly Ala Thr
  65              70              75              80
Val Thr Ala Val Glu Ile Asp Pro Leu Leu Ala Ser Arg Leu Gln Gln
              85              90              95
Thr Val Ala Glu His Ser His Ser Glu Val His Arg Leu Thr Val Val
   100              105              110
Asn Arg Asp Val Leu Ala Leu Arg Arg Glu Asp Leu Ala Ala Ala Pro
   115              120              125
Thr Ala Val Val Ala Asn Leu Pro Tyr Asn Val Ala Val Pro Ala Leu
   130              135              140
Leu His Leu Leu Val Glu Phe Pro Ser Ile Arg Val Val Thr Val Met
  145              150              155              160
Val Gln Ala Glu Val Ala Glu Arg Leu Ala Ala Glu Pro Gly Ser Lys
              165              170              175
Glu Tyr Gly Val Pro Ser Val Lys Leu Arg Phe Phe Gly Arg Val Arg
   180              185              190
Arg Cys Gly Met Val Ser Pro Thr Val Phe Trp Pro Ile Pro Arg Val
   195              200              205
Tyr Ser Gly Leu Val Arg Ile Asp Arg Tyr Glu Thr Ser Pro Trp Pro
  210              215              220
Thr Asp Asp Ala Phe Arg Arg Arg Val Phe Glu Leu Val Asp Ile Ala
  225              230              235              240
Phe Ala Gln Arg Arg Lys Thr Ser Arg Asn Ala Phe Val Gln Trp Ala
              245              250              255
Gly Ser Gly Ser Glu Ser Ala Asn Arg Leu Leu Ala Ala Ser Ile Asp
   260              265              270
Pro Ala Arg Arg Gly Glu Thr Leu Ser Ile Asp Asp Phe Val Arg Leu
   275              280              285
Leu Arg Arg Ser Gly Gly Ser Asp Glu Ala Thr Ser Thr Gly Arg Asp
   290              295              300
Ala Arg Ala Pro Asp Ile Ser Gly His Ala Ser Ala Ser
  305              310              315

```

<210> 186

<211> 306

<212> PRT

<213> Mycobacterium tuberculosis

<400> 186

```

Val Pro Thr Gly Ser Val Thr Val Arg Val Pro Gly Lys Val Asn Leu
  1              5              10              15
Tyr Leu Ala Val Gly Asp Arg Arg Glu Asp Gly Tyr His Glu Leu Thr
   20              25              30
Thr Val Phe His Ala Val Ser Leu Val Asp Glu Val Thr Val Arg Asn
   35              40              45
Ala Asp Val Leu Ser Leu Glu Leu Val Gly Glu Gly Ala Asp Gln Leu
   50              55              60
Pro Thr Asp Glu Arg Asn Leu Ala Trp Gln Ala Ala Glu Leu Met Ala
  65              70              75              80
Glu His Val Gly Arg Ala Pro Asp Val Ser Ile Met Ile Asp Lys Ser
              85              90              95
Ile Pro Val Ala Gly Gly Met Ala Gly Gly Ser Ala Asp Ala Ala Ala
   100              105              110

```

Val Leu Val Ala Met Asn Ser Leu Trp Glu Leu Asn Val Pro Arg Arg
 115 120 125
 Asp Leu Arg Met Leu Ala Ala Arg Leu Gly Ser Asp Val Pro Phe Ala
 130 135 140
 Leu His Gly Gly Thr Ala Leu Gly Thr Gly Arg Gly Glu Glu Leu Ala
 145 150 155 160
 Thr Val Leu Ser Arg Asn Thr Phe His Trp Val Leu Ala Phe Ala Asp
 165 170 175
 Ser Gly Leu Leu Thr Ser Ala Val Tyr Asn Glu Leu Asp Arg Leu Arg
 180 185 190
 Glu Val Gly Asp Pro Pro Arg Leu Gly Glu Pro Gly Pro Val Leu Ala
 195 200 205
 Ala Leu Ala Ala Gly Asp Pro Asp Gln Leu Ala Pro Leu Leu Gly Asn
 210 215 220
 Glu Met Gln Ala Ala Ala Val Ser Leu Asp Pro Ala Leu Ala Arg Ala
 225 230 235 240
 Leu Arg Ala Gly Val Glu Ala Gly Ala Leu Ala Gly Ile Val Ser Gly
 245 250 255
 Ser Gly Pro Thr Cys Ala Phe Leu Cys Thr Ser Ala Ser Ser Ala Ile
 260 265 270
 Asp Val Gly Ala Gln Leu Ser Gly Ala Gly Val Cys Arg Thr Val Arg
 275 280 285
 Val Ala Thr Gly Pro Val Pro Gly Ala Arg Val Val Ser Ala Pro Thr
 290 295 300
 Glu Val
 305

<210> 187

<211> 370

<212> PRT

<213> Mycobacterium tuberculosis

<400> 187

Met Leu Arg Arg Met Gly Asp Ala Ser Leu Thr Thr Glu Leu Gly Arg
 1 5 10 15
 Val Leu Val Thr Gly Gly Ala Gly Phe Val Gly Ala Asn Leu Val Thr
 20 25 30
 Thr Leu Leu Asp Arg Gly His Trp Val Arg Ser Phe Asp Arg Ala Pro
 35 40 45
 Ser Leu Leu Pro Ala His Pro Gln Leu Glu Val Leu Gln Gly Asp Ile
 50 55 60
 Thr Asp Ala Asp Val Cys Ala Ala Ala Val Asp Gly Ile Asp Thr Ile
 65 70 75 80
 Phe His Thr Ala Ala Ile Ile Glu Leu Met Gly Gly Ala Ser Val Thr
 85 90 95
 Asp Glu Tyr Arg Gln Arg Ser Phe Ala Val Asn Val Gly Gly Thr Glu
 100 105 110
 Asn Leu Leu His Ala Gly Gln Arg Ala Gly Val Gln Arg Phe Val Tyr
 115 120 125
 Thr Ser Ser Asn Ser Val Val Met Gly Gly Gln Asn Ile Ala Gly Gly
 130 135 140
 Asp Glu Thr Leu Pro Tyr Thr Asp Arg Phe Asn Asp Leu Tyr Thr Glu
 145 150 155 160
 Thr Lys Val Val Ala Glu Arg Phe Val Leu Ala Gln Asn Gly Val Asp
 165 170 175
 Gly Met Leu Thr Cys Ala Ile Arg Pro Ser Gly Ile Trp Gly Asn Gly
 180 185 190

Asp Gln Thr Met Phe Arg Lys Leu Phe Glu Ser Val Leu Lys Gly His
 195 200 205
 Val Lys Val Leu Val Gly Arg Lys Ser Ala Arg Leu Asp Asn Ser Tyr
 210 215 220
 Val His Asn Leu Ile His Gly Phe Ile Leu Ala Ala Ala His Leu Val
 225 230 235 240
 Pro Asp Gly Thr Ala Pro Gly Gln Ala Tyr Phe Ile Asn Asp Ala Glu
 245 250 255
 Pro Ile Asn Met Phe Glu Phe Ala Arg Pro Val Leu Glu Ala Cys Gly
 260 265 270
 Gln Arg Trp Pro Lys Met Arg Ile Ser Gly Pro Ala Val Arg Trp Val
 275 280 285
 Met Thr Gly Trp Gln Arg Leu His Phe Arg Phe Gly Phe Pro Ala Pro
 290 295 300
 Leu Leu Glu Pro Leu Ala Val Glu Arg Leu Tyr Leu Asp Asn Tyr Phe
 305 310 315 320
 Ser Ile Ala Lys Ala Arg Arg Asp Leu Gly Tyr Glu Pro Leu Phe Thr
 325 330 335
 Thr Gln Gln Ala Leu Thr Glu Cys Leu Pro Tyr Tyr Val Ser Leu Phe
 340 345 350
 Glu Gln Met Lys Asn Glu Ala Arg Ala Glu Lys Thr Ala Ala Thr Val
 355 360 365
 Lys Pro
 370

<210> 188

<211> 335

<212> PRT

<213> Mycobacterium tuberculosis

<400> 188

Met Val Pro Thr Val Asp Met Gly Ile Pro Gly Ala Ser Val Ser Ser
 1 5 10 15
 Arg Ser Val Ala Asp Arg Pro Asn Arg Lys Arg Val Leu Leu Ala Glu
 20 25 30
 Pro Arg Gly Tyr Cys Ala Gly Val Asp Arg Ala Val Glu Thr Val Glu
 35 40 45
 Arg Ala Leu Gln Lys His Gly Pro Pro Val Tyr Val Arg His Glu Ile
 50 55 60
 Val His Asn Arg His Val Val Asp Thr Leu Ala Lys Ala Gly Ala Val
 65 70 75 80
 Phe Val Glu Glu Thr Glu Gln Val Pro Glu Gly Ala Ile Val Val Phe
 85 90 95
 Ser Ala His Gly Val Ala Pro Thr Val His Val Ser Ala Ser Glu Arg
 100 105 110
 Asn Leu Gln Val Ile Asp Ala Thr Cys Pro Leu Val Thr Lys Val His
 115 120 125
 Asn Glu Ala Arg Arg Phe Ala Arg Asp Asp Tyr Asp Ile Leu Leu Ile
 130 135 140
 Gly His Glu Gly His Glu Glu Val Val Gly Thr Ala Gly Glu Ala Pro
 145 150 155 160
 Asp His Val Gln Leu Val Asp Gly Val Asp Ala Val Asp Gln Val Thr
 165 170 175
 Val Arg Asp Glu Asp Lys Val Val Trp Leu Ser Gln Thr Thr Leu Ser
 180 185 190
 Val Asp Glu Thr Met Glu Ile Val Gly Arg Leu Arg Arg Arg Phe Pro
 195 200 205

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Lys Leu Gln Asp Pro Pro Ser Asp Asp Ile Cys Tyr Ala Thr Gln Asn
 210                215                220
Arg Gln Val Ala Val Lys Ala Met Ala Pro Glu Cys Glu Leu Val Ile
225                230                235                240
Val Val Gly Ser Arg Asn Ser Ser Asn Ser Val Arg Leu Val Glu Val
                245                250                255
Ala Leu Gly Ala Gly Ala Arg Ala Ala His Leu Val Asp Trp Ala Asp
                260                265                270
Asp Ile Asp Ser Ala Trp Leu Asp Gly Val Thr Thr Val Gly Val Thr
                275                280                285
Ser Gly Ala Ser Val Pro Glu Val Leu Val Arg Gly Val Leu Glu Arg
                290                295                300
Leu Ala Glu Cys Gly Tyr Asp Ile Val Gln Pro Val Thr Thr Ala Asn
305                310                315                320
Glu Thr Leu Val Phe Ala Leu Pro Arg Glu Leu Arg Ser Pro Arg
                325                330                335

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<210> 189
<211> 224
<212> PRT
<213> Mycobacterium tuberculosis

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<400> 189
Met His Ile Gly Leu Lys Ile Phe Ile Trp Gly Val Leu Gly Leu Val
 1                5                10                15
Val Phe Gly Ala Leu Leu Phe Gly Pro Ala Gly Thr Phe Asp Tyr Trp
                20                25                30
Gln Ala Trp Val Phe Leu Ala Ala Phe Val Ser Thr Thr Ile Gly Pro
                35                40                45
Thr Ile Tyr Leu Ala Arg Asn Asp Pro Ala Ala Leu Gln Arg Arg Met
                50                55                60
Arg Ser Gly Pro Leu Ala Glu Gly Arg Thr Ile Gln Lys Phe Ile Val
65                70                75                80
Ile Gly Ala Phe Leu Gly Phe Phe Ala Met Met Val Leu Ser Ala Cys
                85                90                95
Asp His Arg Tyr Gly Trp Ser Ser Val Pro Ala Ala Val Cys Val Ile
                100                105                110
Gly Asp Val Leu Val Met Thr Gly Leu Gly Ile Ala Met Leu Val Val
                115                120                125
Ile Gln Asn Arg Tyr Ala Ala Ser Thr Val Arg Val Glu Ala Gly Gln
                130                135                140
Ile Leu Ala Ser Asp Gly Leu Tyr Lys Ile Val Arg His Pro Met Tyr
145                150                155                160
Ala Gly Asn Val Val Met Met Thr Gly Ile Pro Leu Ala Leu Gly Ser
                165                170                175
Tyr Trp Ala Met Phe Ile Leu Val Pro Gly Thr Leu Val Leu Val Phe
                180                185                190
Arg Ile Leu Asp Glu Glu Lys Leu Leu Thr Gln Glu Leu Ser Gly Tyr
                195                200                205
Arg Glu Tyr Arg Gln Leu Val Arg Tyr Arg Leu Val Pro Tyr Val Trp
                210                215                220

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<210> 190
<211> 549
<212> PRT
<213> Mycobacterium tuberculosis

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<400> 190

Val	Ser	His	Leu	Ser	Gln	Arg	Met	Ala	Gly	Leu	Leu	Arg	Val	His	Gly
1				5					10					15	
Glu	Trp	Ser	Arg	Ser	Val	Asp	Thr	Arg	Val	Asp	Thr	Asp	Asn	Ala	Met
			20					25					30		
Pro	Ala	Arg	Phe	Ser	Ala	Gln	Ile	Gln	Asn	Glu	Asp	Glu	Val	Thr	Ser
		35				40					45				
Asp	Gln	Gly	Asn	Asn	Gly	Gly	Pro	Asn	Gly	Gly	Gly	Arg	Leu	Ala	Pro
50					55					60					
Arg	Pro	Val	Phe	Arg	Pro	Pro	Val	Asp	Pro	Ala	Ser	Arg	Gln	Ala	Phe
65					70					75					80
Gly	Arg	Pro	Ser	Gly	Val	Gln	Gly	Ser	Phe	Val	Ala	Glu	Arg	Val	Arg
				85					90					95	
Pro	Gln	Lys	Tyr	Gln	Asp	Gln	Ser	Asp	Phe	Thr	Pro	Asn	Asp	Gln	Leu
			100					105					110		
Ala	Asp	Pro	Val	Leu	Gln	Glu	Ala	Phe	Gly	Arg	Pro	Phe	Ala	Gly	Ala
		115					120					125			
Glu	Ser	Leu	Gln	Arg	His	Pro	Ile	Asp	Ala	Gly	Ala	Leu	Ala	Ala	Glu
130						135					140				
Lys	Asp	Gly	Ala	Gly	Pro	Asp	Glu	Pro	Asp	Asp	Pro	Trp	Arg	Asp	Pro
145					150					155					160
Ala	Ala	Ala	Ala	Ala	Leu	Gly	Thr	Pro	Ala	Leu	Ala	Ala	Pro	Ala	Pro
				165					170					175	
His	Gly	Ala	Leu	Ala	Gly	Ser	Gly	Lys	Leu	Gly	Val	Arg	Asp	Val	Leu
			180					185					190		
Phe	Gly	Gly	Lys	Val	Ser	Tyr	Leu	Ala	Leu	Gly	Ile	Leu	Val	Ala	Ile
		195					200					205			
Ala	Leu	Val	Ile	Gly	Gly	Ile	Gly	Gly	Val	Ile	Gly	Arg	Lys	Thr	Ala
210						215					220				
Glu	Val	Val	Asp	Ala	Phe	Thr	Thr	Ser	Lys	Val	Thr	Leu	Ser	Thr	Thr
225					230					235					240
Gly	Asn	Ala	Gln	Glu	Pro	Ala	Gly	Arg	Phe	Thr	Lys	Val	Ala	Ala	Ala
				245					250					255	
Val	Ala	Asp	Ser	Val	Val	Thr	Ile	Glu	Ser	Val	Ser	Asp	Gln	Glu	Gly
			260					265					270		
Met	Gln	Gly	Ser	Gly	Val	Ile	Val	Asp	Gly	Arg	Gly	Tyr	Ile	Val	Thr
		275				280						285			
Asn	Asn	His	Val	Ile	Ser	Glu	Ala	Ala	Asn	Asn	Pro	Ser	Gln	Phe	Lys
290					295						300				
Thr	Thr	Val	Val	Phe	Asn	Asp	Gly	Lys	Glu	Val	Pro	Ala	Asn	Leu	Val
305					310					315					320
Gly	Arg	Asp	Pro	Lys	Thr	Asp	Leu	Ala	Val	Leu	Lys	Val	Asp	Asn	Val
				325					330					335	
Asp	Asn	Leu	Thr	Val	Ala	Arg	Leu	Gly	Asp	Ser	Ser	Lys	Val	Arg	Val
			340					345					350		
Gly	Asp	Glu	Val	Leu	Ala	Val	Gly	Ala	Pro	Leu	Gly	Leu	Arg	Ser	Thr
		355					360					365			
Val	Thr	Gln	Gly	Ile	Val	Ser	Ala	Leu	His	Arg	Pro	Val	Pro	Leu	Ser
						375					380				
Gly	Glu	Gly	Ser	Asp	Thr	Asp	Thr	Val	Ile	Asp	Ala	Ile	Gln	Thr	Asp
385					390					395					400
Ala	Ser	Ile	Asn	His	Gly	Asn	Ser	Gly	Gly	Pro	Leu	Ile	Asp	Met	Asp
				405					410					415	
Ala	Gln	Val	Ile	Gly	Ile	Asn	Thr	Ala	Gly	Lys	Ser	Leu	Ser	Asp	Ser
			420					425					430		
Ala	Ser	Gly	Leu	Gly	Phe	Ala	Ile	Pro	Val	Asn	Glu	Met	Lys	Leu	Val
		435					440					445			

Ala Asn Ser Leu Ile Lys Asp Gly Lys Ile Val His Pro Thr Leu Gly
 450 455 460
 Ile Ser Thr Arg Ser Val Ser Asn Ala Ile Ala Ser Gly Ala Gln Val
 465 470 475 480
 Ala Asn Val Lys Ala Gly Ser Pro Ala Gln Lys Gly Gly Ile Leu Glu
 485 490 495
 Asn Asp Val Ile Val Lys Val Gly Asn Arg Ala Val Ala Asp Ser Asp
 500 505 510
 Glu Phe Val Val Ala Val Arg Gln Leu Ala Ile Gly Gln Asp Ala Pro
 515 520 525
 Ile Glu Val Val Arg Glu Gly Arg His Val Thr Leu Thr Val Lys Pro
 530 535 540
 Asp Pro Asp Ser Thr
 545

<210> 191

<211> 131

<212> PRT

<213> Mycobacterium tuberculosis

<400> 191

Val Phe Ala Asn Ile Gly Trp Trp Glu Met Leu Val Leu Val Met Val
 1 5 10 15
 Gly Leu Val Val Leu Gly Pro Glu Arg Leu Pro Gly Ala Ile Arg Trp
 20 25 30
 Ala Ala Ser Ala Leu Arg Gln Ala Arg Asp Tyr Leu Ser Gly Val Thr
 35 40 45
 Ser Gln Leu Arg Glu Asp Ile Gly Pro Glu Phe Asp Asp Leu Arg Gly
 50 55 60
 His Leu Gly Glu Leu Gln Lys Leu Arg Gly Met Thr Pro Arg Ala Ala
 65 70 75 80
 Leu Thr Lys His Leu Leu Asp Gly Asp Asp Ser Leu Phe Thr Gly Asp
 85 90 95
 Phe Asp Arg Pro Thr Pro Lys Lys Pro Asp Ala Ala Gly Ser Ala Gly
 100 105 110
 Pro Asp Ala Thr Glu Gln Ile Gly Ala Gly Pro Ile Pro Phe Asp Ser
 115 120 125
 Asp Ala Thr
 130

<210> 192

<211> 390

<212> PRT

<213> Mycobacterium tuberculosis

<400> 192

Met Pro Ser Arg Leu His Ser Ala Val Met Ser Gly Thr Arg Asp Gly
 1 5 10 15
 Asp Leu Asn Ala Ala Ile Arg Thr Ala Leu Gly Lys Val Ile Asp Pro
 20 25 30
 Glu Leu Arg Arg Pro Ile Thr Glu Leu Gly Met Val Lys Ser Ile Asp
 35 40 45
 Thr Gly Pro Asp Gly Ser Val His Val Glu Ile Tyr Leu Thr Ile Ala
 50 55 60
 Gly Cys Pro Lys Lys Ser Glu Ile Thr Glu Arg Val Thr Arg Ala Val
 65 70 75 80
 Ala Asp Val Pro Gly Thr Ser Ala Val Arg Val Ser Leu Asp Val Met

[illegible]

<210> 193

<211> 366

<212> PRT

<213> Mycobacterium tuberculosis

<400> 193

Val 1	Phe	Pro	Gly	Phe 5	Asp	Ala	Leu	Pro	Glu 10	Val	Leu	Arg	Pro	Val 15	Ala
Arg	Pro	Gln	Pro	Pro	Asn	Ala	His	Pro	Val	Ala	Gln	Pro	Pro	Ala	Gln
			20					25					30		
Ala	Leu	Val	Asp	Cys	Gly	Val	Tyr	Val	Cys	Gly	Gln	Arg	Leu	Pro	Gly
			35				40					45			
Lys	Tyr	Thr	Tyr	Ala	Ala	Ala	Leu	Arg	Glu	Val	Arg	Glu	Ile	Glu	Leu
	50					55					60				
Thr	Gly	Gln	Glu	Ala	Phe	Val	Trp	Ile	Gly	Leu	His	Glu	Pro	Asp	Glu
65					70					75				80	
Asn	Gln	Met	Gln	Asp	Val	Ala	Asp	Val	Phe	Gly	Leu	His	Pro	Leu	Ala

				85				90				95			
Val	Glu	Asp	Ala	Val	His	Ala	His	Gln	Arg	Pro	Lys	Leu	Glu	Arg	Tyr
100				105				110							
Asp	Glu	Thr	Leu	Phe	Leu	Val	Leu	Lys	Thr	Val	Asn	Tyr	Val	Pro	His
115				120				125							
Glu	Ser	Val	Val	Leu	Ala	Arg	Glu	Ile	Val	Lys	Thr	Gly	Glu	Ile	Met
130				135				140							
Ile	Phe	Val	Gly	Lys	Asp	Phe	Val	Val	Thr	Val	Arg	His	Gly	Glu	His
145				150				155				160			
Gly	Gly	Leu	Ser	Glu	Val	Arg	Lys	Arg	Met	Asp	Ala	Asp	Pro	Glu	His
165				170				175							
Leu	Arg	Leu	Gly	Pro	Tyr	Ala	Val	Met	His	Ala	Ile	Ala	Asp	Tyr	Val
180				185				190							
Val	Asp	His	Tyr	Leu	Glu	Val	Thr	Asn	Leu	Met	Glu	Thr	Asp	Ile	Asp
195				200				205							
Ser	Ile	Glu	Glu	Val	Ala	Phe	Ala	Pro	Gly	Arg	Lys	Leu	Asp	Ile	Glu
210				215				220							
Pro	Ile	Tyr	Leu	Leu	Lys	Arg	Glu	Val	Val	Glu	Leu	Arg	Arg	Cys	Val
225				230				235				240			
Asn	Pro	Leu	Ser	Thr	Ala	Phe	Gln	Arg	Met	Gln	Thr	Glu	Ser	Lys	Asp
245				250				255							
Leu	Ile	Ser	Lys	Glu	Val	Arg	Arg	Tyr	Leu	Arg	Asp	Val	Ala	Asp	His
260				265				270							
Gln	Thr	Glu	Ala	Ala	Asp	Gln	Ile	Ala	Ser	Tyr	Asp	Asp	Met	Leu	Asn
275				280				285							
Ser	Leu	Val	Gln	Ala	Ala	Leu	Ala	Arg	Val	Gly	Met	Gln	Gln	Asn	Met
290				295				300							
Asp	Met	Arg	Lys	Ile	Ser	Ala	Trp	Ala	Gly	Ile	Ile	Ala	Val	Pro	Thr
305				310				315				320			
Met	Ile	Ala	Gly	Ile	Tyr	Gly	Met	Asn	Phe	His	Phe	Met	Pro	Glu	Leu
325				330				335							
Asp	Ser	Arg	Trp	Gly	Tyr	Pro	Thr	Val	Ile	Gly	Gly	Met	Val	Leu	Ile
340				345				350							
Cys	Leu	Phe	Leu	Tyr	His	Val	Phe	Arg	Asn	Arg	Asn	Trp	Leu		
355				360				365							

<210> 194

<211> 528

<212> PRT

<213> Mycobacterium tuberculosis

<400> 194

Met	Asp	Thr	Gln	Ser	Asp	Tyr	Val	Val	Val	Gly	Thr	Gly	Ser	Ala	Gly
1				5					10					15	
Ala	Val	Val	Ala	Ser	Arg	Leu	Ser	Thr	Asp	Pro	Ala	Thr	Thr	Val	Val
			20					25					30		
Ala	Leu	Glu	Ala	Gly	Pro	Arg	Asp	Lys	Asn	Arg	Phe	Ile	Gly	Val	Pro
		35					40					45			
Ala	Ala	Phe	Ser	Lys	Leu	Phe	Arg	Ser	Glu	Ile	Asp	Trp	Asp	Tyr	Leu
		50				55					60				
Thr	Glu	Pro	Gln	Pro	Glu	Leu	Asp	Gly	Arg	Glu	Ile	Tyr	Trp	Pro	Arg
65					70					75					80
Gly	Lys	Val	Leu	Gly	Gly	Ser	Ser	Ser	Met	Asn	Ala	Met	Met	Trp	Val
				85					90					95	
Arg	Gly	Phe	Ala	Ser	Asp	Tyr	Asp	Glu	Trp	Ala	Ala	Arg	Ala	Gly	Pro
			100					105					110		
Arg	Trp	Ser	Tyr	Ala	Asp	Val	Leu	Gly	Tyr	Phe	Arg	Arg	Ile	Glu	Asn

Val	Thr	Ala	Ala	Trp	His	Phe	Val	Ser	Gly	Asp	Asp	Ser	Gly	Val	Thr
130						135					140				
Gly	Pro	Leu	His	Ile	Ser	Arg	Gln	Arg	Ser	Pro	Arg	Ser	Val	Thr	Ala
145					150					155					160
Ala	Trp	Leu	Ala	Ala	Ala	Arg	Glu	Cys	Gly	Phe	Ala	Ala	Ala	Arg	Pro
				165					170						175
Asn	Ser	Pro	Arg	Pro	Glu	Gly	Phe	Cys	Glu	Thr	Val	Val	Thr	Gln	Arg
			180					185						190	
Arg	Gly	Ala	Arg	Phe	Ser	Thr	Ala	Asp	Ala	Tyr	Leu	Lys	Pro	Ala	Met
		195					200					205			
Arg	Arg	Lys	Asn	Leu	Arg	Val	Leu	Thr	Gly	Ala	Thr	Ala	Thr	Arg	Val
	210					215					220				
Val	Ile	Asp	Gly	Asp	Arg	Ala	Val	Gly	Val	Glu	Tyr	Gln	Ser	Asp	Gly
225					230					235					240
Gln	Thr	Arg	Ile	Val	Tyr	Ala	Arg	Arg	Glu	Val	Val	Leu	Cys	Ala	Gly
				245					250					255	
Ala	Val	Asn	Ser	Pro	Gln	Leu	Leu	Met	Leu	Ser	Gly	Ile	Gly	Asp	Arg
			260					265					270		
Asp	His	Leu	Ala	Glu	His	Asp	Ile	Asp	Thr	Val	Tyr	His	Ala	Pro	Glu
	275						280					285			
Val	Gly	Cys	Asn	Leu	Leu	Asp	His	Leu	Val	Thr	Val	Leu	Gly	Phe	Asp
	290					295					300				
Val	Glu	Lys	Asp	Ser	Leu	Phe	Ala	Ala	Glu	Lys	Pro	Gly	Gln	Leu	Ile
305					310					315					320
Ser	Tyr	Leu	Leu	Arg	Arg	Arg	Gly	Met	Leu	Thr	Ser	Asn	Val	Gly	Glu
				325					330					335	
Ala	Tyr	Gly	Phe	Val	Arg	Ser	Arg	Pro	Glu	Leu	Lys	Leu	Pro	Asp	Leu
			340					345					350		
Glu	Leu	Ile	Phe	Ala	Pro	Ala	Pro	Phe	Tyr	Asp	Glu	Ala	Leu	Val	Pro
		355					360					365			
Pro	Ala	Gly	His	Gly	Val	Val	Phe	Gly	Pro	Ile	Leu	Val	Ala	Pro	Gln
	370					375					380				
Ser	Arg	Gly	Gln	Ile	Thr	Leu	Arg	Ser	Ala	Asp	Pro	His	Ala	Lys	Pro
385					390					395					400
Val	Ile	Glu	Pro	Arg	Tyr	Leu	Ser	Asp	Leu	Gly	Gly	Val	Asp	Arg	Ala
				405					410					415	
Ala	Met	Met	Ala	Gly	Leu	Arg	Ile	Cys	Ala	Arg	Ile	Ala	Gln	Ala	Arg
			420					425					430		
Pro	Leu	Arg	Asp	Leu	Leu	Gly	Ser	Ile	Ala	Arg	Pro	Arg	Asn	Ser	Thr
		435					440					445			
Glu	Leu	Asp	Glu	Ala	Thr	Leu	Glu	Leu	Ala	Leu	Ala	Thr	Cys	Ser	His
	450					455					460				
Thr	Leu	Tyr	His	Pro	Met	Gly	Thr	Cys	Arg	Met	Gly	Ser	Asp	Glu	Ala
465					470					475					480
Ser	Val	Val	Asp	Pro	Gln	Leu	Arg	Val	Arg	Gly	Val	Asp	Gly	Leu	Arg
				485					490					495	
Val	Ala	Asp	Ala	Ser	Val	Met	Pro	Ser	Thr	Val	Arg	Gly	His	Thr	His
			500					505					510		
Ala	Pro	Ser	Val	Leu	Ile	Gly	Glu	Lys	Ala	Ala	Asp	Leu	Ile	Arg	Ser
		515					520					525			

<210> 195

<211> 441

<212> PRT

<213> Mycobacterium tuberculosis

<400> 195

Val	Pro	Gly	Asp	Glu	Lys	Pro	Val	Gly	Val	Ala	Val	Leu	Gly	Leu	Gly
1				5				10					15		
Asn	Val	Gly	Ser	Glu	Val	Val	Arg	Ile	Ile	Glu	Asn	Ser	Ala	Glu	Asp
			20					25					30		
Leu	Ala	Ala	Arg	Val	Gly	Ala	Pro	Leu	Val	Leu	Arg	Gly	Ile	Gly	Val
		35					40					45			
Arg	Arg	Val	Thr	Thr	Asp	Arg	Gly	Val	Pro	Ile	Glu	Leu	Leu	Thr	Asp
	50					55					60				
Asp	Ile	Glu	Glu	Leu	Val	Ala	Arg	Glu	Asp	Val	Asp	Ile	Val	Val	Glu
65					70					75					80
Val	Met	Gly	Pro	Val	Glu	Pro	Ser	Arg	Lys	Ala	Ile	Leu	Gly	Ala	Leu
				85					90					95	
Glu	Arg	Gly	Lys	Ser	Val	Val	Thr	Ala	Asn	Lys	Ala	Leu	Leu	Ala	Thr
			100					105					110		
Ser	Thr	Gly	Glu	Leu	Ala	Gln	Ala	Ala	Glu	Ser	Ala	His	Val	Asp	Leu
		115					120					125			
Tyr	Phe	Glu	Ala	Ala	Val	Ala	Gly	Ala	Ile	Pro	Val	Ile	Arg	Pro	Leu
	130					135						140			
Thr	Gln	Ser	Leu	Ala	Gly	Asp	Thr	Val	Leu	Arg	Val	Ala	Gly	Ile	Val
145					150					155					160
Asn	Gly	Thr	Thr	Asn	Tyr	Ile	Leu	Ser	Ala	Met	Asp	Ser	Thr	Gly	Ala
				165					170					175	
Asp	Tyr	Ala	Ser	Ala	Leu	Ala	Asp	Ala	Ser	Ala	Leu	Gly	Tyr	Ala	Glu
		180						185					190		
Ala	Asp	Pro	Thr	Ala	Asp	Val	Glu	Gly	Tyr	Asp	Ala	Ala	Ala	Lys	Ala
		195					200					205			
Ala	Ile	Leu	Ala	Ser	Ile	Ala	Phe	His	Thr	Arg	Val	Thr	Ala	Asp	Asp
	210					215					220				
Val	Tyr	Arg	Glu	Gly	Ile	Thr	Lys	Val	Thr	Pro	Ala	Asp	Phe	Gly	Ser
225					230					235					240
Ala	His	Ala	Leu	Gly	Cys	Thr	Ile	Lys	Leu	Leu	Ser	Ile	Cys	Glu	Arg
			245						250					255	
Ile	Thr	Thr	Asp	Glu	Gly	Ser	Gln	Arg	Val	Ser	Ala	Arg	Val	Tyr	Pro
			260					265					270		
Ala	Leu	Val	Pro	Leu	Ser	His	Pro	Leu	Ala	Ala	Val	Asn	Gly	Ala	Phe
		275					280					285			
Asn	Ala	Val	Val	Val	Glu	Ala	Glu	Ala	Ala	Gly	Arg	Leu	Met	Phe	Tyr
	290					295					300				
Gly	Gln	Gly	Ala	Gly	Gly	Ala	Pro	Thr	Ala	Ser	Ala	Val	Thr	Gly	Asp
305					310					315					320
Leu	Val	Met	Ala	Ala	Arg	Asn	Arg	Val	Leu	Gly	Ser	Arg	Gly	Pro	Arg
			325						330					335	
Glu	Ser	Lys	Tyr	Ala	Gln	Leu	Pro	Val	Ala	Pro	Met	Gly	Phe	Ile	Glu
			340					345					350		
Thr	Arg	Tyr	Tyr	Val	Ser	Met	Asn	Val	Ala	Asp	Lys	Pro	Gly	Val	Leu
		355					360					365			
Ser	Ala	Val	Ala	Ala	Glu	Phe	Ala	Lys	Arg	Glu	Val	Ser	Ile	Ala	Glu
		370				375					380				
Val	Arg	Gln	Glu	Gly	Val	Val	Asp	Glu	Gly	Gly	Arg	Arg	Val	Gly	Ala
385					390					395					400
Arg	Ile	Val	Val	Val	Thr	His	Leu	Ala	Thr	Asp	Ala	Ala	Leu	Ser	Glu
				405					410					415	
Thr	Val	Asp	Ala	Leu	Asp	Asp	Leu	Asp	Val	Val	Gln	Gly	Val	Ser	Ser
			420					425					430		
Val	Ile	Arg	Leu	Glu	Gly	Thr	Gly	Leu							
		435					440								

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<210> 196
<211> 389
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 196

[illegible]

<210> 197
 <211> 208
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 197
 Val Ser Val Gly Glu Gly Pro Asp Thr Lys Pro Thr Ala Arg Gly Gln
 1 5 10 15
 Pro Ala Ala Val Gly Arg Val Val Val Leu Ser Gly Pro Ser Ala Val
 20 25 30
 Gly Lys Ser Thr Val Val Arg Cys Leu Arg Glu Arg Ile Pro Asn Leu
 35 40 45
 His Phe Ser Val Ser Ala Thr Thr Arg Ala Pro Arg Pro Gly Glu Val
 50 55 60
 Asp Gly Val Asp Tyr His Phe Ile Asp Pro Thr Arg Phe Gln Gln Leu
 65 70 75 80
 Ile Asp Gln Gly Glu Leu Leu Glu Trp Ala Glu Ile His Gly Gly Leu
 85 90 95
 His Arg Ser Gly Thr Leu Ala Gln Pro Val Arg Ala Ala Ala Ala Thr
 100 105 110
 Gly Val Pro Val Leu Ile Glu Val Asp Leu Ala Gly Ala Arg Ala Ile
 115 120 125
 Lys Lys Thr Met Pro Glu Ala Val Thr Val Phe Leu Ala Pro Pro Ser
 130 135 140
 Trp Gln Asp Leu Gln Ala Arg Leu Ile Gly Arg Gly Thr Glu Thr Ala
 145 150 155 160
 Asp Val Ile Gln Arg Arg Leu Asp Thr Ala Arg Ile Glu Leu Ala Ala
 165 170 175
 Gln Gly Asp Phe Asp Lys Val Val Val Asn Arg Arg Leu Glu Ser Ala
 180 185 190
 Cys Ala Glu Leu Val Ser Leu Leu Val Gly Thr Ala Pro Gly Ser Pro
 195 200 205

<210> 198
 <211> 457
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 198
 Met Thr Pro Arg Ser Arg Gly Pro Arg Arg Arg Pro Leu Asp Pro Ala
 1 5 10 15
 Arg Arg Ala Ala Phe Glu Thr Leu Arg Ala Val Ser Ala Arg Asp Ala
 20 25 30
 Tyr Ala Asn Leu Val Leu Pro Ala Leu Leu Ala Gln Arg Gly Ile Gly
 35 40 45
 Gly Arg Asp Ala Ala Phe Ala Thr Glu Leu Thr Tyr Gly Thr Cys Arg
 50 55 60
 Ala Arg Gly Leu Leu Asp Ala Val Ile Gly Ala Ala Ala Glu Arg Ser
 65 70 75 80
 Pro Gln Ala Ile Asp Pro Val Leu Leu Asp Leu Leu Arg Leu Gly Thr
 85 90 95
 Tyr Gln Leu Leu Arg Thr Arg Val Asp Ala His Ala Ala Val Ser Thr
 100 105 110
 Thr Val Glu Gln Ala Gly Ile Glu Phe Asp Ser Ala Arg Ala Gly Phe
 115 120 125
 Val Asn Gly Val Leu Arg Thr Ile Ala Gly Arg Asp Glu Arg Ser Trp

130	135	140
Val Gly Glu Leu Ala Pro Asp Ala Gln Asn Asp Pro Ile Gly His Ala		
145	150	155
Ala Phe Val His Ala His Pro Arg Trp Ile Ala Gln Ala Phe Ala Asp		160
	165	170
Ala Leu Gly Ala Ala Val Gly Glu Leu Glu Ala Val Leu Ala Ser Asp		175
	180	185
Asp Glu Arg Pro Ala Val His Leu Ala Ala Arg Pro Gly Val Leu Thr		190
	195	200
Ala Gly Glu Leu Ala Arg Ala Val Arg Gly Thr Val Gly Arg Tyr Ser		205
	210	215
Pro Phe Ala Val Tyr Leu Pro Arg Gly Asp Pro Gly Arg Leu Ala Pro		220
225	230	235
Val Arg Asp Gly Gln Ala Leu Val Gln Asp Glu Gly Ser Gln Leu Val		240
	245	250
Ala Arg Ala Leu Thr Leu Ala Pro Val Asp Gly Asp Thr Gly Arg Trp		255
	260	265
Leu Asp Leu Cys Ala Gly Pro Gly Gly Lys Thr Ala Leu Leu Ala Gly		270
	275	280
Leu Gly Leu Gln Cys Ala Ala Arg Val Thr Ala Val Glu Pro Ser Pro		285
	290	295
His Arg Ala Asp Leu Val Ala Gln Asn Thr Arg Gly Leu Pro Val Glu		300
305	310	315
Leu Leu Arg Val Asp Gly Arg His Thr Asp Leu Asp Pro Gly Phe Asp		320
	325	330
Arg Val Leu Val Asp Ala Pro Cys Thr Gly Leu Gly Ala Leu Arg Arg		335
	340	345
Arg Pro Glu Ala Arg Trp Arg Arg Gln Pro Ala Asp Val Ala Ala Leu		350
	355	360
Ala Lys Leu Gln Arg Glu Leu Ser Ala Ala Ile Ala Leu Thr Arg		365
	370	375
Pro Gly Gly Val Val Leu Tyr Ala Thr Cys Ser Pro His Leu Ala Glu		380
385	390	395
Thr Val Gly Ala Val Ala Asp Ala Leu Arg Arg His Pro Val His Ala		400
	405	410
Leu Asp Thr Arg Pro Leu Phe Glu Pro Val Ile Ala Gly Leu Gly Glu		415
	420	425
Gly Pro His Val Gln Leu Trp Pro His Arg His Gly Thr Asp Ala Met		430
	435	440
Phe Ala Ala Ala Leu Arg Arg Leu Thr		445
	450	455

<210> 199

<211> 339

<212> PRT

<213> Mycobacterium tuberculosis

<400> 199

Met Asn Val Glu Gln Val Lys Ser Ile Asp Glu Ala Met Gly Leu Ala	
1	5
Ile Glu His Ser Tyr Gln Val Lys Gly Thr Thr Tyr Pro Lys Pro Pro	10
	15
	20
Val Gly Ala Val Ile Val Asp Pro Asn Gly Arg Ile Val Gly Ala Gly	25
	30
	35
Gly Thr Glu Pro Ala Gly Gly Asp His Ala Glu Val Val Ala Leu Arg	40
	45
	50
Arg Ala Gly Gly Leu Ala Ala Gly Ala Ile Val Val Thr Met Glu	55
	60

65					70					75				80
Pro	Cys	Asn	His	Tyr	Gly	Lys	Thr	Pro	Pro	Cys	Val	Asn	Ala	Leu Ile
				85					90					95
Glu	Ala	Arg	Val	Gly	Thr	Val	Val	Tyr	Ala	Val	Ala	Asp	Pro	Asn Gly
			100					105					110	
Ile	Ala	Gly	Gly	Gly	Ala	Gly	Arg	Leu	Ser	Ala	Ala	Gly	Leu	Gln Val
		115					120					125		
Arg	Ser	Gly	Val	Leu	Ala	Glu	Gln	Val	Ala	Ala	Gly	Pro	Leu	Arg Glu
	130					135					140			
Trp	Leu	His	Lys	Gln	Arg	Thr	Gly	Leu	Pro	His	Val	Thr	Trp	Lys Tyr
145				150						155				160
Ala	Thr	Ser	Ile	Asp	Gly	Arg	Ser	Ala	Ala	Ala	Asp	Gly	Ser	Ser Gln
				165				170						175
Trp	Ile	Ser	Ser	Glu	Ala	Ala	Arg	Leu	Asp	Leu	His	Arg	Arg	Arg Ala
		180						185				190		
Ile	Ala	Asp	Ala	Ile	Leu	Val	Gly	Thr	Gly	Thr	Val	Leu	Ala	Asp Asp
	195						200					205		
Pro	Ala	Leu	Thr	Ala	Arg	Leu	Ala	Asp	Gly	Ser	Leu	Ala	Pro	Gln Gln
	210					215					220			
Pro	Leu	Arg	Val	Val	Val	Gly	Lys	Arg	Asp	Ile	Pro	Pro	Glu	Ala Arg
225					230					235				240
Val	Leu	Asn	Asp	Glu	Ala	Arg	Thr	Met	Met	Ile	Arg	Thr	His	Glu Pro
				245					250					255
Met	Glu	Val	Leu	Arg	Ala	Leu	Ser	Asp	Arg	Thr	Asp	Val	Leu	Leu Glu
		260						265				270		
Gly	Gly	Pro	Thr	Leu	Ala	Gly	Ala	Phe	Leu	Arg	Ala	Gly	Ala	Ile Asn
		275				280						285		
Arg	Ile	Leu	Ala	Tyr	Val	Ala	Pro	Ile	Leu	Leu	Gly	Gly	Pro	Val Thr
	290					295					300			
Ala	Val	Asp	Asp	Val	Gly	Val	Ser	Asn	Ile	Thr	Asn	Ala	Leu	Arg Trp
305					310					315				320
Gln	Phe	Asp	Ser	Val	Glu	Lys	Val	Gly	Pro	Asp	Leu	Leu	Leu	Ser Leu
				325					330					335

Val Ala Arg

<210> 200

<211> 117

<212> PRT

<213> Mycobacterium tuberculosis

<400> 200

Val	Ala	Gly	Val	Thr	Ala	Ala	Val	Ser	Ala	Arg	Leu	Lys	Ala	Asp	Glu
1				5					10					15	
Ala	Arg	Arg	Pro	Gly	Phe	Tyr	Ala	Ala	Gly	Ser	Gly	Pro	Leu	Pro	Gln
			20					25					30		
Val	Arg	Gly	Ser	Thr	Leu	Pro	Val	Met	Glu	Leu	Ala	Leu	Gln	Ile	Thr
	35					40						45			
Leu	Ile	Val	Thr	Ser	Val	Leu	Val	Val	Leu	Leu	Val	Leu	Leu	His	Arg
	50					55					60				
Ala	Lys	Gly	Gly	Gly	Leu	Ser	Thr	Leu	Phe	Gly	Gly	Gly	Val	Gln	Ser
65					70				75					80	
Ser	Leu	Ser	Gly	Ser	Thr	Val	Val	Glu	Lys	Asn	Leu	Asp	Arg	Leu	Thr
				85				90						95	
Leu	Phe	Val	Thr	Gly	Ile	Trp	Leu	Val	Ser	Ile	Ile	Gly	Val	Ala	Leu
			100					105					110		

Leu Ile Lys Tyr Arg

115

<210> 201
 <211> 269
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 201

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Met Thr Gly Leu Leu Asp Gly Lys Arg Ile Leu Val Ser Gly Ile Ile
 1           5           10           15
Thr Asp Ser Ser Ile Ala Phe His Ile Ala Arg Val Ala Gln Glu Gln
      20           25           30
Gly Ala Gln Leu Val Leu Thr Gly Phe Asp Arg Leu Arg Leu Ile Gln
      35           40           45
Arg Ile Thr Asp Arg Leu Pro Ala Lys Ala Pro Leu Leu Glu Leu Asp
      50           55           60
Val Gln Asn Glu Glu His Leu Ala Ser Leu Ala Gly Arg Val Thr Glu
      65           70           75           80
Ala Ile Gly Ala Gly Asn Lys Leu Asp Gly Val Val His Ser Ile Gly
      85           90           95
Phe Met Pro Gln Thr Gly Met Gly Ile Asn Pro Phe Phe Asp Ala Pro
      100           105           110
Tyr Ala Asp Val Ser Lys Gly Ile His Ile Ser Ala Tyr Ser Tyr Ala
      115           120           125
Ser Met Ala Lys Ala Leu Leu Pro Ile Met Asn Pro Gly Gly Ser Ile
      130           135           140
Val Gly Met Asp Phe Asp Pro Ser Arg Ala Met Pro Ala Tyr Asn Trp
      145           150           155           160
Met Thr Val Ala Lys Ser Ala Leu Glu Ser Val Asn Arg Phe Val Ala
      165           170           175
Arg Glu Ala Gly Lys Tyr Gly Val Arg Ser Asn Leu Val Ala Ala Gly
      180           185           190
Pro Ile Arg Thr Leu Ala Met Ser Ala Ile Val Gly Gly Ala Leu Gly
      195           200           205
Glu Glu Ala Gly Ala Gln Ile Gln Leu Leu Glu Glu Gly Trp Asp Gln
      210           215           220
Arg Ala Pro Ile Gly Trp Asn Met Lys Asp Ala Thr Pro Val Ala Lys
      225           230           235           240
Thr Val Cys Ala Leu Leu Ser Asp Trp Leu Pro Ala Thr Thr Gly Asp
      245           250           255
Ile Ile Tyr Ala Asp Gly Gly Ala His Thr Gln Leu Leu
      260           265

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<210> 202
 <211> 472
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 202

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Val Thr Arg Arg Gly Lys Ile Val Cys Thr Leu Gly Pro Ala Thr Gln
 1           5           10           15
Arg Asp Asp Leu Val Arg Ala Leu Val Glu Ala Gly Met Asp Val Ala
      20           25           30
Arg Met Asn Phe Ser His Gly Asp Tyr Asp Asp His Lys Val Ala Tyr
      35           40           45
Glu Arg Val Arg Val Ala Ser Asp Ala Thr Gly Arg Ala Val Gly Val
      50           55           60

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Leu	Ala	Asp	Leu	Gln	Gly	Pro	Lys	Ile	Arg	Leu	Gly	Arg	Phe	Ala	Ser	65	70	75	80
Gly	Ala	Thr	His	Trp	Ala	Glu	Gly	Glu	Thr	Val	Arg	Ile	Thr	Val	Gly	85	90	95	
Ala	Cys	Glu	Gly	Ser	His	Asp	Arg	Val	Ser	Thr	Thr	Tyr	Lys	Arg	Leu	100	105	110	
Ala	Gln	Asp	Ala	Val	Ala	Gly	Asp	Arg	Val	Leu	Val	Asp	Asp	Gly	Lys	115	120	125	
Val	Ala	Leu	Val	Val	Asp	Ala	Val	Glu	Gly	Asp	Asp	Val	Val	Cys	Thr	130	135	140	
Val	Val	Glu	Gly	Gly	Pro	Val	Ser	Asp	Asn	Lys	Gly	Ile	Ser	Leu	Pro	145	150	155	160
Gly	Met	Asn	Val	Thr	Ala	Pro	Ala	Leu	Ser	Glu	Lys	Asp	Ile	Glu	Asp	165	170	175	
Leu	Thr	Phe	Ala	Leu	Asn	Leu	Gly	Val	Asp	Met	Val	Ala	Leu	Ser	Phe	180	185	190	
Val	Arg	Ser	Pro	Ala	Asp	Val	Glu	Leu	Val	His	Glu	Val	Met	Asp	Arg	195	200	205	
Ile	Gly	Arg	Arg	Val	Pro	Val	Ile	Ala	Lys	Leu	Glu	Lys	Pro	Glu	Ala	210	215	220	
Ile	Asp	Asn	Leu	Glu	Ala	Ile	Val	Leu	Ala	Phe	Asp	Ala	Val	Met	Val	225	230	235	240
Ala	Arg	Gly	Asp	Leu	Gly	Val	Glu	Leu	Pro	Leu	Glu	Glu	Val	Pro	Leu	245	250	255	
Val	Gln	Lys	Arg	Ala	Ile	Gln	Met	Ala	Arg	Glu	Asn	Ala	Lys	Pro	Val	260	265	270	
Ile	Val	Ala	Thr	Gln	Met	Leu	Asp	Ser	Met	Ile	Glu	Asn	Ser	Arg	Pro	275	280	285	
Thr	Arg	Ala	Glu	Ala	Ser	Asp	Val	Ala	Asn	Ala	Val	Leu	Asp	Gly	Ala	290	295	300	
Asp	Ala	Leu	Met	Leu	Ser	Gly	Glu	Thr	Ser	Val	Gly	Lys	Tyr	Pro	Leu	305	310	315	320
Ala	Ala	Val	Arg	Thr	Met	Ser	Arg	Ile	Ile	Cys	Ala	Val	Glu	Glu	Asn	325	330	335	
Ser	Thr	Ala	Ala	Pro	Pro	Leu	Thr	His	Ile	Pro	Arg	Thr	Lys	Arg	Gly	340	345	350	
Val	Ile	Ser	Tyr	Ala	Ala	Arg	Asp	Ile	Gly	Glu	Arg	Leu	Asp	Ala	Lys	355	360	365	
Ala	Leu	Val	Ala	Phe	Thr	Gln	Ser	Gly	Asp	Thr	Val	Arg	Arg	Leu	Ala	370	375	380	
Arg	Leu	His	Thr	Pro	Leu	Pro	Leu	Leu	Ala	Phe	Thr	Ala	Trp	Pro	Glu	385	390	395	400
Val	Arg	Ser	Gln	Leu	Ala	Met	Thr	Trp	Gly	Thr	Glu	Thr	Phe	Ile	Val	405	410	415	
Pro	Lys	Met	Gln	Ser	Thr	Asp	Gly	Met	Ile	Arg	Gln	Val	Asp	Lys	Ser	420	425	430	
Leu	Leu	Glu	Leu	Ala	Arg	Tyr	Lys	Arg	Gly	Asp	Leu	Val	Val	Ile	Val	435	440	445	
Ala	Gly	Ala	Pro	Pro	Gly	Thr	Val	Gly	Ser	Thr	Asn	Leu	Ile	His	Val	450	455	460	
His	Arg	Ile	Gly	Glu	Asp	Asp	Val									465	470		

<210> 203

<211> 481

<212> PRT

<213> Mycobacterium tuberculosis

<400> 203

Met	Pro	Ser	Pro	Thr	Val	Thr	Ser	Pro	Gln	Val	Ala	Val	Asn	Asp	Ile
1				5					10					15	
Gly	Ser	Ser	Glu	Asp	Phe	Leu	Ala	Ala	Ile	Asp	Lys	Thr	Ile	Lys	Tyr
			20				25						30		
Phe	Asn	Asp	Gly	Asp	Ile	Val	Glu	Gly	Thr	Ile	Val	Lys	Val	Asp	Arg
	35						40					45			
Asp	Glu	Val	Leu	Leu	Asp	Ile	Gly	Tyr	Lys	Thr	Glu	Gly	Val	Ile	Pro
	50					55					60				
Ala	Arg	Glu	Leu	Ser	Ile	Lys	His	Asp	Val	Asp	Pro	Asn	Glu	Val	Val
65					70					75					80
Ser	Val	Gly	Asp	Glu	Val	Glu	Ala	Leu	Val	Leu	Thr	Lys	Glu	Asp	Lys
			85						90					95	
Glu	Gly	Arg	Leu	Ile	Leu	Ser	Lys	Lys	Arg	Ala	Gln	Tyr	Glu	Arg	Ala
			100					105					110		
Trp	Gly	Thr	Ile	Glu	Ala	Leu	Lys	Glu	Lys	Asp	Glu	Ala	Val	Lys	Gly
	115						120					125			
Thr	Val	Ile	Glu	Val	Val	Lys	Gly	Gly	Leu	Ile	Leu	Asp	Ile	Gly	Leu
	130					135						140			
Arg	Gly	Phe	Leu	Pro	Ala	Ser	Leu	Val	Glu	Met	Arg	Arg	Val	Arg	Asp
145					150					155					160
Leu	Gln	Pro	Tyr	Ile	Gly	Lys	Glu	Ile	Glu	Ala	Lys	Ile	Ile	Glu	Leu
				165					170					175	
Asp	Lys	Asn	Arg	Asn	Asn	Val	Val	Leu	Ser	Arg	Arg	Ala	Trp	Leu	Glu
		180						185					190		
Gln	Thr	Gln	Ser	Glu	Val	Arg	Ser	Glu	Phe	Leu	Asn	Asn	Leu	Gln	Lys
		195					200					205			
Gly	Thr	Ile	Arg	Lys	Gly	Val	Val	Ser	Ser	Ile	Val	Asn	Phe	Gly	Ala
	210					215					220				
Phe	Val	Asp	Leu	Gly	Gly	Val	Asp	Gly	Leu	Val	His	Val	Ser	Glu	Leu
225					230						235				240
Ser	Trp	Lys	His	Ile	Asp	His	Pro	Ser	Glu	Val	Val	Gln	Val	Gly	Asp
				245					250					255	
Glu	Val	Thr	Val	Glu	Val	Leu	Asp	Val	Asp	Met	Asp	Arg	Glu	Arg	Val
			260					265					270		
Ser	Leu	Ser	Leu	Lys	Ala	Thr	Gln	Glu	Asp	Pro	Trp	Arg	His	Phe	Ala
		275					280					285			
Arg	Thr	His	Ala	Ile	Gly	Gln	Ile	Val	Pro	Gly	Lys	Val	Thr	Lys	Leu
	290					295					300				
Val	Pro	Phe	Gly	Ala	Phe	Val	Arg	Val	Glu	Glu	Gly	Ile	Glu	Gly	Leu
305					310					315					320
Val	His	Ile	Ser	Glu	Leu	Ala	Glu	Arg	His	Val	Glu	Val	Pro	Asp	Gln
				325					330					335	
Val	Val	Ala	Val	Gly	Asp	Asp	Ala	Met	Val	Lys	Val	Ile	Asp	Ile	Asp
			340					345					350		
Leu	Glu	Arg	Arg	Arg	Ile	Ser	Leu	Ser	Leu	Lys	Gln	Ala	Asn	Glu	Asp
		355					360					365			
Tyr	Thr	Glu	Glu	Phe	Asp	Pro	Ala	Lys	Tyr	Gly	Met	Ala	Asp	Ser	Tyr
	370					375					380				
Asp	Glu	Gln	Gly	Asn	Tyr	Ile	Phe	Pro	Glu	Gly	Phe	Asp	Ala	Glu	Thr
385					390					395					400
Asn	Glu	Trp	Leu	Glu	Gly	Phe	Glu	Lys	Gln	Arg	Ala	Glu	Trp	Glu	Ala
				405					410					415	
Arg	Tyr	Ala	Glu	Ala	Glu	Arg	Arg	His	Lys	Met	His	Thr	Ala	Gln	Met
			420					425					430		
Glu	Lys	Phe	Ala	Ala	Ala	Glu	Ala	Ala	Gly	Arg	Gly	Ala	Asp	Asp	Gln

	435		440		445
Ser	Ser	Ala	Ser	Ser	Ala
450			455		460
Ala	Ser	Asp	Ala	Gln	Leu
465			470		475
Ala					480

<210> 204

<211> 407

<212> PRT

<213> Mycobacterium tuberculosis

<400> 204

Met	Leu	Arg	Ile	Gly	Leu	Thr	Gly	Gly	Ile	Gly	Ala	Gly	Lys	Ser	Leu
1			5						10					15	
Leu	Ser	Thr	Thr	Phe	Ser	Gln	Cys	Gly	Gly	Ile	Val	Val	Asp	Gly	Asp
		20					25						30		
Val	Leu	Ala	Arg	Glu	Val	Val	Gln	Pro	Gly	Thr	Glu	Gly	Leu	Ala	Ser
		35					40					45			
Leu	Val	Asp	Ala	Phe	Gly	Arg	Asp	Ile	Leu	Leu	Ala	Asp	Gly	Ala	Leu
50						55					60				
Asp	Arg	Gln	Ala	Leu	Ala	Ala	Lys	Ala	Phe	Arg	Asp	Asp	Glu	Ser	Arg
65					70					75					80
Gly	Val	Leu	Asn	Gly	Ile	Val	His	Pro	Leu	Val	Ala	Arg	Arg	Arg	Ser
			85					90						95	
Glu	Ile	Ile	Ala	Ala	Val	Ser	Gly	Asp	Ala	Val	Val	Val	Glu	Asp	Ile
		100						105						110	
Pro	Leu	Leu	Val	Glu	Ser	Gly	Met	Ala	Pro	Leu	Phe	Pro	Leu	Val	Val
		115					120					125			
Val	Val	His	Ala	Asp	Val	Glu	Leu	Arg	Val	Arg	Arg	Leu	Val	Glu	Gln
		130					135					140			
Arg	Gly	Met	Ala	Glu	Ala	Asp	Ala	Arg	Ala	Arg	Ile	Ala	Ala	Gln	Ala
145					150					155					160
Ser	Asp	Gln	Gln	Arg	Arg	Ala	Val	Ala	Asp	Val	Trp	Leu	Asp	Asn	Ser
			165						170					175	
Gly	Ser	Pro	Glu	Asp	Leu	Val	Arg	Arg	Ala	Arg	Asp	Val	Trp	Asn	Thr
		180						185						190	
Arg	Val	Gln	Pro	Phe	Ala	His	Asn	Leu	Ala	Gln	Arg	Gln	Ile	Ala	Arg
		195					200						205		
Ala	Pro	Ala	Arg	Leu	Val	Pro	Ala	Asp	Pro	Ser	Trp	Pro	Asp	Gln	Ala
		210					215					220			
Arg	Arg	Ile	Val	Asn	Arg	Leu	Lys	Ile	Ala	Cys	Gly	His	Lys	Ala	Leu
225					230					235					240
Arg	Val	Asp	His	Ile	Gly	Ser	Thr	Ala	Val	Ser	Gly	Phe	Pro	Asp	Phe
			245						250					255	
Leu	Ala	Lys	Asp	Val	Ile	Asp	Ile	Gln	Val	Thr	Val	Glu	Ser	Leu	Asp
		260						265						270	
Val	Ala	Asp	Glu	Leu	Ala	Glu	Pro	Leu	Leu	Ala	Ala	Gly	Tyr	Pro	Arg
		275					280						285		
Leu	Glu	His	Ile	Thr	Gln	Asp	Thr	Glu	Lys	Thr	Asp	Ala	Arg	Ser	Thr
		290				295					300				
Val	Gly	Arg	Tyr	Asp	His	Thr	Asp	Ser	Ala	Ala	Leu	Trp	His	Lys	Arg
305					310					315					320
Val	His	Ala	Ser	Ala	Asp	Pro	Gly	Arg	Pro	Thr	Asn	Val	His	Leu	Arg
			325						330					335	
Val	His	Gly	Trp	Pro	Asn	Gln	Gln	Phe	Ala	Leu	Leu	Phe	Val	Asp	Trp

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<210> 205
<211> 394
<212> PRT
<213> Mycobacterium tuberculosis
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<400>	> 205														
Met	Thr	Leu	Asp	Val	Pro	Val	Asn	Gln	Gly	His	Val	Pro	Pro	Gly	Ser
1				5					10					15	
Val	Ala	Cys	Cys	Leu	Val	Gly	Val	Thr	Ala	Val	Ala	Asp	Gly	Ile	Ala
			20					25					30		
Gly	His	Ser	Leu	Ser	Asn	Phe	Gly	Ala	Leu	Pro	Pro	Glu	Ile	Asn	Ser
		35				40						45			
Gly	Arg	Met	Tyr	Ser	Gly	Pro	Gly	Ser	Gly	Pro	Leu	Met	Ala	Ala	Ala
	50				55					60					
Ala	Ala	Trp	Asp	Gly	Leu	Ala	Ala	Glu	Leu	Ser	Ser	Ala	Ala	Thr	Gly
65					70					75					80
Tyr	Gly	Ala	Ala	Ile	Ser	Glu	Leu	Thr	Asn	Met	Arg	Trp	Trp	Ser	Gly
				85					90					95	
Pro	Ala	Ser	Asp	Ser	Met	Val	Ala	Ala	Val	Leu	Pro	Phe	Val	Gly	Trp
			100					105					110		
Leu	Ser	Thr	Thr	Ala	Thr	Leu	Ala	Glu	Gln	Ala	Ala	Met	Gln	Ala	Arg
		115					120					125			
Ala	Ala	Ala	Ala	Ala	Phe	Glu	Ala	Ala	Phe	Ala	Met	Thr	Val	Pro	Pro
	130				135						140				
Pro	Ala	Ile	Ala	Ala	Asn	Arg	Thr	Leu	Leu	Met	Thr	Leu	Val	Asp	Thr
145					150					155					160
Asn	Trp	Phe	Gly	Gln	Asn	Thr	Pro	Ala	Ile	Ala	Thr	Thr	Glu	Ser	Gln
				165					170					175	
Tyr	Ala	Glu	Met	Trp	Ala	Gln	Asp	Ala	Ala	Ala	Met	Tyr	Gly	Tyr	Ala
			180					185					190		
Ser	Ala	Ala	Ala	Pro	Ala	Thr	Val	Leu	Thr	Pro	Phe	Ala	Pro	Pro	Pro
		195					200					205			
Gln	Thr	Thr	Asn	Ala	Thr	Gly	Leu	Val	Gly	His	Ala	Thr	Ala	Val	Ala
	210					215					220				
Ala	Leu	Arg	Gly	Gln	His	Ser	Trp	Ala	Ala	Ala	Pro	Trp	Ser	Asp	
225					230					235					240
Ile	Gln	Lys	Tyr	Trp	Met	Met	Phe	Leu	Gly	Ala	Leu	Ala	Thr	Ala	Glu
				245					250					255	
Gly	Phe	Ile	Tyr	Asp	Ser	Gly	Gly	Leu	Thr	Leu	Asn	Ala	Leu	Gln	Phe
			260					265					270		
Val	Gly	Gly	Met	Leu	Trp	Ser	Thr	Ala	Leu	Ala	Glu	Ala	Gly	Ala	Ala
		275					280					285			
Glu	Ala	Ala	Ala	Gly	Ala	Gly	Gly	Ala	Ala	Gly	Trp	Ser	Ala	Trp	Ser
	290				295						300				
Gln	Leu	Gly	Ala	Gly	Pro	Val	Ala	Ala	Ser	Ala	Thr	Leu	Ala	Ala	Lys
305					310					315					320
Ile	Gly	Pro	Met	Ser	Val	Pro	Pro	Gly	Trp	Ser	Ala	Pro	Pro	Ala	Thr

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          325          330          335
Pro Gln Ala Gln Thr Val Ala Arg Ser Ile Pro Gly Ile Arg Ser Ala
          340          345          350
Ala Glu Ala Ala Glu Thr Ser Val Leu Leu Arg Gly Ala Pro Thr Pro
          355          360          365
Gly Arg Ser Arg Ala Ala His Met Gly Arg Arg Tyr Gly Arg Arg Leu
          370          375          380
Thr Val Met Ala Asp Arg Pro Asn Val Gly
385          390

```

<210> 206

<211> 203

<212> PRT

<213> Mycobacterium tuberculosis

<400> 206

```

Met Thr Arg Ser Tyr Arg Pro Ala Pro Pro Ile Glu Arg Val Val Leu
 1          5          10          15
Leu Asn Asp Arg Gly Asp Ala Thr Gly Val Ala Asp Lys Ala Thr Val
          20          25          30
His Thr Gly Asp Thr Pro Leu His Leu Ala Phe Ser Ser Tyr Val Phe
          35          40          45
Asp Leu His Asp Gln Leu Leu Ile Thr Arg Arg Ala Ala Thr Lys Arg
          50          55          60
Thr Trp Pro Ala Val Trp Thr Asn Ser Cys Cys Gly His Pro Leu Pro
65          70          75          80
Gly Glu Ser Leu Pro Gly Ala Ile Arg Arg Arg Leu Ala Ala Glu Leu
          85          90          95
Gly Leu Thr Pro Asp Arg Val Asp Leu Ile Leu Pro Gly Phe Arg Tyr
          100          105          110
Arg Ala Ala Met Ala Asp Gly Thr Val Glu Asn Glu Ile Cys Pro Val
          115          120          125
Tyr Arg Val Gln Val Asp Gln Gln Pro Arg Pro Asn Ser Asp Glu Val
          130          135          140
Asp Ala Ile Arg Trp Leu Ser Trp Glu Gln Phe Val Arg Asp Val Thr
145          150          155          160
Ala Gly Val Ile Ala Pro Val Ser Pro Trp Cys Arg Ser Gln Leu Gly
          165          170          175
Tyr Leu Thr Lys Leu Gly Pro Cys Pro Ala Gln Trp Pro Val Ala Asp
          180          185          190
Asp Cys Arg Leu Pro Lys Ala Ala His Gly Asn
          195          200

```

<210> 207

<211> 655

<212> PRT

<213> Mycobacterium tuberculosis

<400> 207

```

Met Leu Pro Asn Phe Ala Val Leu Pro Pro Glu Val Asn Ser Ala Arg
 1          5          10          15
Val Phe Ala Gly Ala Gly Ser Ala Pro Met Leu Ala Ala Ala Ala Ala
          20          25          30
Trp Asp Asp Leu Ala Ser Glu Leu His Cys Ala Ala Met Ser Phe Gly
          35          40          45
Ser Val Thr Ser Gly Leu Val Val Gly Trp Trp Gln Gly Ser Ala Ser
          50          55          60

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Ala	Ala	Met	Val	Asp	Ala	Ala	Ala	Ser	Tyr	Ile	Gly	Trp	Leu	Ser	Thr	65	70	75	80
Ser	Ala	Ala	His	Ala	Glu	Gly	Ala	Ala	Gly	Leu	Ala	Arg	Ala	Ala	Val	85	90	95	
Ser	Val	Phe	Glu	Glu	Ala	Leu	Ala	Ala	Thr	Val	His	Pro	Ala	Met	Val	100	105	110	
Ala	Ala	Asn	Arg	Ala	Gln	Val	Ala	Ser	Leu	Val	Ala	Ser	Asn	Leu	Phe	115	120	125	
Gly	Gln	Asn	Ala	Pro	Ala	Ile	Ala	Ala	Leu	Glu	Ser	Leu	Tyr	Glu	Cys	130	135	140	
Met	Trp	Ala	Gln	Asp	Ala	Ala	Ala	Met	Ala	Gly	Tyr	Tyr	Val	Gly	Ala	145	150	155	160
Ser	Ala	Val	Ala	Thr	Gln	Leu	Ala	Ser	Trp	Leu	Gln	Arg	Leu	Gln	Ser	165	170	175	
Ile	Pro	Gly	Ala	Ala	Ser	Leu	Asp	Ala	Arg	Leu	Pro	Ser	Ser	Ala	Glu	180	185	190	
Ala	Pro	Met	Gly	Val	Val	Arg	Ala	Val	Asn	Ser	Ala	Ile	Ala	Ala	Asn	195	200	205	
Ala	Ala	Ala	Ala	Gln	Thr	Val	Gly	Leu	Val	Met	Gly	Gly	Ser	Gly	Thr	210	215	220	
Pro	Ile	Pro	Ser	Ala	Arg	Tyr	Val	Glu	Leu	Ala	Asn	Ala	Leu	Tyr	Met	225	230	235	240
Ser	Gly	Ser	Val	Pro	Gly	Val	Ile	Ala	Gln	Ala	Leu	Phe	Thr	Pro	Gln	245	250	255	
Gly	Leu	Tyr	Pro	Val	Val	Val	Ile	Lys	Asn	Leu	Thr	Phe	Asp	Ser	Ser	260	265	270	
Val	Ala	Gln	Gly	Ala	Val	Ile	Leu	Glu	Ser	Ala	Ile	Arg	Gln	Gln	Ile	275	280	285	
Ala	Ala	Gly	Asn	Asn	Val	Thr	Val	Phe	Gly	Tyr	Ser	Gln	Ser	Ala	Thr	290	295	300	
Ile	Ser	Ser	Leu	Val	Met	Ala	Asn	Leu	Ala	Ala	Ser	Ala	Asp	Pro	Pro	305	310	315	320
Ser	Pro	Asp	Glu	Leu	Ser	Phe	Thr	Leu	Ile	Gly	Asn	Pro	Asn	Asn	Pro	325	330	335	
Asn	Gly	Gly	Val	Ala	Thr	Arg	Phe	Pro	Gly	Ile	Ser	Phe	Pro	Ser	Leu	340	345	350	
Gly	Val	Thr	Ala	Thr	Gly	Ala	Thr	Pro	His	Asn	Leu	Tyr	Pro	Thr	Lys	355	360	365	
Ile	Tyr	Thr	Ile	Glu	Tyr	Asp	Gly	Val	Ala	Asp	Phe	Pro	Arg	Tyr	Pro	370	375	380	
Leu	Asn	Phe	Val	Ser	Thr	Leu	Asn	Ala	Ile	Ala	Gly	Thr	Tyr	Tyr	Val	385	390	395	400
His	Ser	Asn	Tyr	Phe	Ile	Leu	Thr	Pro	Glu	Gln	Ile	Asp	Ala	Ala	Val	405	410	415	
Pro	Leu	Thr	Asn	Thr	Val	Gly	Pro	Thr	Met	Thr	Gln	Tyr	Tyr	Ile	Ile	420	425	430	
Arg	Thr	Glu	Asn	Leu	Pro	Leu	Leu	Glu	Pro	Leu	Arg	Ser	Val	Pro	Ile	435	440	445	
Val	Gly	Asn	Pro	Leu	Ala	Asn	Leu	Val	Gln	Pro	Asn	Leu	Lys	Val	Ile	450	455	460	
Val	Asn	Leu	Gly	Tyr	Gly	Asp	Pro	Ala	Tyr	Gly	Tyr	Ser	Thr	Ser	Pro	465	470	475	480
Pro	Asn	Val	Ala	Thr	Pro	Phe	Gly	Leu	Phe	Pro	Glu	Val	Ser	Pro	Val	485	490	495	
Val	Ile	Ala	Asp	Ala	Leu	Val	Ala	Gly	Thr	Gln	Gln	Gly	Ile	Gly	Asp	500	505	510	
Phe	Ala	Tyr	Asp	Val	Ser	His	Leu	Glu	Leu	Pro	Leu	Pro	Ala	Asp	Gly				

		515					520					525				
Ser	Thr	Met	Pro	Ser	Thr	Ala	Pro	Gly	Ser	Gly	Thr	Pro	Val	Pro	Pro	
	530					535					540					
Leu	Ser	Ile	Asp	Ser	Leu	Ile	Asp	Asp	Leu	Gln	Val	Ala	Asn	Arg	Asn	
545					550					555					560	
Leu	Ala	Asn	Thr	Ile	Ser	Lys	Val	Ala	Ala	Thr	Ser	Tyr	Ala	Thr	Val	
				565					570					575		
Leu	Pro	Thr	Ala	Asp	Ile	Ala	Asn	Ala	Ala	Leu	Thr	Ile	Val	Pro	Ser	
			580					585					590			
Tyr	Asn	Ile	His	Leu	Phe	Leu	Glu	Gly	Ile	Gln	Gln	Ala	Leu	Lys	Gly	
	595					600					605					
Asp	Pro	Met	Gly	Leu	Val	Asn	Ala	Val	Gly	Tyr	Pro	Leu	Ala	Ala	Asp	
	610					615					620					
Val	Ala	Leu	Phe	Thr	Ala	Ala	Gly	Gly	Leu	Gln	Leu	Leu	Ile	Ile	Ile	
625					630					635					640	
Ser	Ala	Gly	Arg	Thr	Ile	Ala	Asn	Asp	Ile	Ser	Ala	Ile	Val	Pro		
				645					650					655		

<210> 208

<211> 485

<212> PRT

<213> Mycobacterium tuberculosis

<400> 208

Met 1	Ser	Ser	Ser	Glu 5	Ser	Pro	Ala	Gly	Ile 10	Ala	Gln	Ile	Gly	Val 15	Thr
Gly	Leu	Ala	Val	Met	Gly	Ser	Asn	Ile	Ala	Arg	Asn	Phe	Ala	Arg	His
			20					25					30		
Gly	Tyr	Thr	Val	Ala	Val	His	Asn	Arg	Ser	Val	Ala	Lys	Thr	Asp	Ala
		35					40					45			
Leu	Leu	Lys	Glu	His	Ser	Ser	Asp	Gly	Lys	Phe	Val	Arg	Ser	Glu	Thr
	50					55				60					
Ile	Pro	Glu	Phe	Leu	Ala	Ala	Leu	Glu	Lys	Pro	Arg	Arg	Val	Leu	Ile
65					70					75					80
Met	Val	Lys	Ala	Gly	Glu	Ala	Thr	Asp	Ala	Asp	Ala	Val	Ile	Asn	Glu
				85					90					95	
Leu	Ala	Asp	Ala	Met	Glu	Pro	Gly	Asp	Ile	Ile	Ile	Asp	Gly	Gly	Asn
			100					105					110		
Ala	Leu	Tyr	Thr	Asp	Thr	Met	Arg	Arg	Glu	Lys	Ala	Met	Arg	Glu	Arg
		115					120					125			
Gly	Leu	His	Phe	Val	Gly	Ala	Gly	Ile	Ser	Gly	Gly	Glu	Glu	Gly	Ala
	130					135				140					
Leu	Asn	Gly	Pro	Ser	Ile	Met	Pro	Gly	Gly	Pro	Ala	Glu	Ser	Tyr	Gln
145					150					155					160
Ser	Leu	Gly	Pro	Leu	Leu	Glu	Glu	Ile	Ser	Ala	His	Val	Asp	Gly	Val
				165					170					175	
Pro	Cys	Cys	Thr	His	Ile	Gly	Pro	Asp	Gly	Ser	Gly	His	Phe	Val	Lys
			180					185					190		
Met	Val	His	Asn	Gly	Ile	Glu	Tyr	Ser	Asp	Met	Gln	Leu	Ile	Gly	Glu
		195					200				205				
Ala	Tyr	Gln	Leu	Met	Arg	Asp	Gly	Leu	Gly	Leu	Thr	Ala	Pro	Ala	Ile
	210					215					220				
Ala	Asp	Val	Phe	Thr	Glu	Trp	Asn	Asn	Gly	Asp	Leu	Asp	Ser	Tyr	Leu
225					230					235					240
Val	Glu	Ile	Thr	Ala	Glu	Val	Leu	Arg	Gln	Thr	Asp	Ala	Lys	Thr	Gly
				245					250					255	
Lys	Pro	Leu	Val	Asp	Val	Ile	Val	Asp	Arg	Ala	Glu	Gln	Lys	Gly	Thr

[illegible]

```
<210> 209
<211> 462
<212> PRT
<213> Mycobacterium tuberculosis
```

<400> 209															
Val	Ala	Gln	Ala	Pro	His	Ile	His	Arg	Thr	Arg	Tyr	Ala	Lys	Cys	Gly
1				5					10					15	
Asp	Met	Asp	Ile	Ala	Tyr	Gln	Val	Leu	Gly	Asp	Gly	Pro	Thr	Asp	Leu
			20					25					30		
Leu	Val	Leu	Pro	Gly	Pro	Phe	Val	Pro	Ile	Asp	Ser	Ile	Asp	Asp	Glu
		35					40					45			
Pro	Ser	Leu	Tyr	Arg	Phe	His	Arg	Arg	Leu	Ala	Ser	Phe	Ser	Arg	Val
	50					55					60				
Ile	Arg	Leu	Asp	His	Arg	Gly	Val	Gly	Leu	Ser	Ser	Arg	Leu	Ala	Ala
65				70					75						80
Ile	Thr	Thr	Leu	Gly	Pro	Lys	Phe	Trp	Ala	Gln	Asp	Ala	Ile	Ala	Val
			85						90					95	
Met	Asp	Ala	Val	Gly	Cys	Glu	Gln	Ala	Thr	Ile	Phe	Ala	Pro	Ser	Phe
			100					105					110		
His	Ala	Met	Asn	Gly	Leu	Val	Leu	Ala	Ala	Asp	Tyr	Pro	Glu	Arg	Val
		115					120					125			
Arg	Ser	Leu	Ile	Val	Val	Asn	Gly	Ser	Ala	Arg	Pro	Leu	Trp	Ala	Pro
	130					135					140				
Asp	Tyr	Pro	Val	Gly	Ala	Gln	Val	Arg	Arg	Ala	Asp	Pro	Phe	Leu	Thr
145				150						155					160
Val	Ala	Leu	Glu	Pro	Asp	Ala	Val	Glu	Arg	Gly	Phe	Asp	Val	Leu	Ser

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      165      170      175
Ile Val Ala Pro Thr Val Ala Gly Asp Asp Val Phe Arg Ala Trp Trp
      180      185      190
Asp Leu Ala Gly Asn Arg Ala Gly Pro Pro Ser Ile Ala Arg Ala Val
      195      200      205
Ser Lys Val Ile Ala Glu Ala Asp Val Arg Asp Val Leu Gly His Ile
      210      215      220
Glu Ala Pro Thr Leu Ile Leu His Arg Val Gly Ser Thr Tyr Ile Pro
      225      230      235
Val Gly His Gly Arg Tyr Leu Ala Glu His Ile Ala Gly Ser Arg Leu
      245      250      255
Val Glu Leu Pro Gly Thr Asp Thr Leu Tyr Trp Val Gly Asp Thr Gly
      260      265      270
Pro Met Leu Asp Glu Ile Glu Glu Phe Ile Thr Gly Val Arg Gly Gly
      275      280      285
Ala Asp Ala Glu Arg Met Leu Ala Thr Ile Met Phe Thr Asp Ile Val
      290      295      300
Gly Ser Thr Gln His Ala Ala Ala Leu Gly Asp Asp Arg Trp Arg Asp
      305      310      315
Leu Leu Asp Asn His Asp Thr Ile Val Cys His Glu Ile Gln Arg Phe
      325      330      335
Gly Gly Arg Glu Val Asn Thr Ala Gly Asp Gly Phe Val Ala Thr Phe
      340      345      350
Thr Ser Pro Ser Ala Ala Ile Ala Cys Ala Asp Asp Ile Val Asp Ala
      355      360      365
Val Ala Ala Leu Gly Ile Glu Val Arg Ile Gly Ile His Ala Gly Glu
      370      375      380
Val Glu Val Arg Asp Ala Ser His Gly Thr Asp Val Ala Gly Val Ala
      385      390      395
Val His Ile Gly Ala Arg Val Cys Ala Leu Ala Gly Pro Ser Glu Val
      405      410      415
Leu Val Ser Ser Thr Val Arg Asp Ile Val Ala Gly Ser Arg His Arg
      420      425      430
Phe Ala Glu Arg Gly Glu Gln Glu Leu Lys Gly Val Pro Gly Arg Trp
      435      440      445
Arg Leu Cys Val Leu Met Arg Asp Asp Ala Thr Arg Thr Arg
      450      455      460

```

<210> 210

<211> 342

<212> PRT

<213> Mycobacterium tuberculosis

<400> 210

```

Met Arg Glu Asn Leu Gly Gly Val Val Val Arg Leu Gly Val Phe Leu
  1      5      10      15
Ala Val Cys Leu Leu Thr Ala Phe Leu Leu Ile Ala Val Phe Gly Glu
      20      25      30
Val Arg Phe Gly Asp Gly Lys Thr Tyr Tyr Ala Glu Phe Ala Asn Val
      35      40      45
Ser Asn Leu Arg Thr Gly Lys Leu Val Arg Ile Ala Gly Val Glu Val
      50      55      60
Gly Lys Val Thr Arg Ile Ser Ile Asn Pro Asp Ala Thr Val Arg Val
      65      70      75      80
Gln Phe Thr Ala Asp Asn Ser Val Thr Leu Thr Arg Gly Thr Arg Ala
      85      90      95
Val Ile Arg Tyr Asp Asn Leu Phe Gly Asp Arg Tyr Leu Ala Leu Glu

```

[illegible]

$\langle 210 \rangle$ 211

$\langle 211 \rangle$ 221

<212> PRT

<213> Mycobacterium tuberculosis

<400> 211

Met	Ser	Arg	Arg	Ala	Ser	Ala	Thr	Cys	Ala	Leu	Ser	Ala	Thr	Thr	Ala
1				5					10					15	
Val	Ala	Ile	Met	Ala	Ala	Pro	Ala	Ala	Arg	Ala	Asp	Asp	Lys	Arg	Leu
			20					25					30		
Asn	Asp	Gly	Val	Val	Ala	Asn	Val	Tyr	Thr	Val	Gln	Arg	Gln	Ala	Gly
		35					40					45			
Cys	Thr	Asn	Asp	Val	Thr	Ile	Asn	Pro	Gln	Leu	Gln	Leu	Ala	Ala	Gln
	50					55				60					
Trp	His	Thr	Leu	Asp	Leu	Leu	Asn	Asn	Arg	His	Leu	Asn	Asp	Asp	Thr
65					70				75					80	
Gly	Ser	Asp	Gly	Ser	Thr	Pro	Gln	Asp	Arg	Ala	His	Ala	Ala	Gly	Phe
			85					90					95		
Arg	Gly	Lys	Val	Ala	Glu	Thr	Val	Ala	Ile	Asn	Pro	Ala	Val	Ala	Ile
			100					105					110		
Ser	Gly	Ile	Glu	Leu	Ile	Asn	Gln	Trp	Tyr	Tyr	Asn	Pro	Ala	Phe	Phe
		115					120					125			
Ala	Ile	Met	Ser	Asp	Cys	Ala	Asn	Thr	Gln	Ile	Gly	Val	Trp	Ser	Glu
	130					135				140					
Asn	Ser	Pro	Asp	Arg	Thr	Val	Val	Val	Ala	Val	Tyr	Gly	Gln	Pro	Asp

145					150					155					160	
Arg	Pro	Ser	Ala	Met	Pro	Pro	Arg	Gly	Ala	Val	Thr	Gly	Pro	Pro	Ser	
				165					170					175		
Pro	Val	Ala	Ala	Gln	Glu	Asn	Val	Pro	Ile	Asp	Pro	Ser	Pro	Asp	Tyr	
				180					185					190		
Asp	Ala	Ser	Asp	Glu	Ile	Glu	Tyr	Gly	Ile	Asn	Trp	Leu	Pro	Trp	Ile	
				195					200					205		
Leu	Arg	Gly	Val	Tyr	Pro	Pro	Pro	Ala	Met	Pro	Pro	Gln				
				210					215					220		

<210> 212

<211> 322

<212> PRT

<213> Mycobacterium tuberculosis

<400> 212

[illegible]

<210> 213
 <211> 906
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 213

Val	Thr	Glu	Leu	Ala	Glu	Leu	Asp	Arg	Phe	Thr	Ala	Glu	Leu	Pro	Phe
1				5					10					15	
Ser	Leu	Asp	Asp	Phe	Gln	Gln	Arg	Ala	Cys	Ser	Ala	Leu	Glu	Arg	Gly
		20					25					30			
His	Gly	Val	Leu	Val	Cys	Ala	Pro	Thr	Gly	Ala	Gly	Lys	Thr	Val	Val
	35						40					45			
Gly	Glu	Phe	Ala	Val	His	Leu	Ala	Leu	Ala	Ala	Gly	Ser	Lys	Cys	Phe
	50					55					60				
Tyr	Thr	Thr	Pro	Leu	Lys	Ala	Leu	Ser	Asn	Gln	Lys	His	Thr	Asp	Leu
65					70					75					80
Thr	Ala	Arg	Tyr	Gly	Arg	Asp	Gln	Ile	Gly	Leu	Leu	Thr	Gly	Asp	Leu
				85					90					95	
Ser	Val	Asn	Gly	Asn	Ala	Pro	Val	Val	Val	Met	Thr	Thr	Glu	Val	Leu
			100					105					110		
Arg	Asn	Met	Leu	Tyr	Ala	Asp	Ser	Pro	Ala	Leu	Gln	Gly	Leu	Ser	Tyr
	115						120					125			
Val	Val	Met	Asp	Glu	Val	His	Phe	Leu	Ala	Asp	Arg	Met	Arg	Gly	Pro
	130					135					140				
Val	Trp	Glu	Glu	Val	Ile	Leu	Gln	Leu	Pro	Asp	Asp	Val	Arg	Val	Val
145					150					155					160
Ser	Leu	Ser	Ala	Thr	Val	Ser	Asn	Ala	Glu	Glu	Phe	Gly	Gly	Trp	Ile
				165					170					175	
Gln	Thr	Val	Arg	Gly	Asp	Thr	Thr	Val	Val	Val	Asp	Glu	His	Arg	Pro
			180					185					190		
Val	Pro	Leu	Trp	Gln	His	Val	Leu	Val	Gly	Lys	Arg	Met	Phe	Asp	Leu
		195					200					205			
Phe	Asp	Tyr	Arg	Ile	Gly	Glu	Ala	Glu	Gly	Gln	Pro	Gln	Val	Asn	Arg
	210				215					220					
Glu	Leu	Leu	Arg	His	Ile	Ala	His	Arg	Arg	Glu	Ala	Asp	Arg	Met	Ala
225					230					235					240
Asp	Trp	Gln	Pro	Arg	Arg	Arg	Gly	Ser	Gly	Arg	Pro	Gly	Phe	Tyr	Arg
				245					250					255	
Pro	Pro	Gly	Arg	Pro	Glu	Val	Ile	Ala	Lys	Leu	Asp	Ala	Glu	Gly	Leu
			260					265					270		
Leu	Pro	Ala	Ile	Thr	Phe	Val	Phe	Ser	Arg	Ala	Gly	Cys	Asp	Ala	Ala
		275					280					285			
Val	Thr	Gln	Cys	Leu	Arg	Ser	Pro	Leu	Arg	Leu	Thr	Ser	Glu	Glu	Glu
	290					295					300				
Arg	Ala	Arg	Ile	Ala	Glu	Val	Ile	Asp	His	Arg	Cys	Gly	Asp	Leu	Ala
305					310					315					320
Asp	Ser	Asp	Leu	Ala	Val	Leu	Gly	Tyr	Tyr	Glu	Trp	Arg	Glu	Gly	Leu
				325					330					335	
Leu	Arg	Gly	Leu	Ala	Ala	His	His	Ala	Gly	Met	Leu	Pro	Ala	Phe	Arg
			340					345					350		
His	Thr	Val	Glu	Glu	Leu	Phe	Thr	Ala	Gly	Leu	Val	Lys	Ala	Val	Phe
		355					360						365		
Ala	Thr	Glu	Thr	Leu	Ala	Leu	Gly	Ile	Asn	Met	Pro	Ala	Arg	Thr	Val
	370					375					380				
Val	Leu	Glu	Arg	Leu	Val	Lys	Phe	Asn	Gly	Glu	Gln	His	Met	Pro	Leu

385					390					395				400	
Thr	Pro	Gly	Glu	Tyr	Thr	Gln	Leu	Thr	Gly	Arg	Ala	Gly	Arg	Arg	Gly
				405					410					415	
Ile	Asp	Val	Glu	Gly	His	Ala	Val	Val	Ile	Trp	His	Pro	Glu	Ile	Glu
			420					425					430		
Pro	Ser	Glu	Val	Ala	Gly	Leu	Ala	Ser	Thr	Arg	Thr	Phe	Pro	Leu	Arg
			435				440					445			
Ser	Ser	Phe	Ala	Pro	Ser	Tyr	Asn	Met	Thr	Ile	Asn	Leu	Val	His	Arg
			450			455					460				
Met	Gly	Pro	Gln	Gln	Ala	His	Arg	Leu	Leu	Glu	Gln	Ser	Phe	Ala	Gln
465					470					475					480
Tyr	Gln	Ala	Asp	Arg	Ser	Val	Val	Gly	Leu	Val	Arg	Gly	Ile	Glu	Arg
				485				490						495	
Gly	Asn	Arg	Ile	Leu	Gly	Glu	Ile	Ala	Ala	Glu	Leu	Gly	Gly	Ser	Asp
			500					505					510		
Ala	Pro	Ile	Leu	Glu	Tyr	Ala	Arg	Leu	Arg	Ala	Arg	Val	Ser	Glu	Leu
			515				520					525			
Glu	Arg	Ala	Gln	Ala	Arg	Ala	Ser	Arg	Leu	Gln	Arg	Arg	Gln	Ala	Ala
			530			535					540				
Thr	Asp	Ala	Leu	Ala	Ala	Leu	Arg	Arg	Gly	Asp	Ile	Ile	Thr	Ile	Thr
545					550					555					560
His	Gly	Arg	Arg	Gly	Gly	Leu	Ala	Val	Val	Leu	Glu	Ser	Ala	Arg	Asp
				565				570						575	
Arg	Asp	Asp	Pro	Arg	Pro	Leu	Val	Leu	Thr	Glu	His	Arg	Trp	Ala	Gly
			580					585					590		
Arg	Ile	Ser	Ser	Ala	Asp	Tyr	Ser	Gly	Thr	Thr	Pro	Val	Gly	Ser	Met
			595				600					605			
Thr	Leu	Pro	Lys	Arg	Val	Glu	His	Arg	Gln	Pro	Arg	Val	Arg	Arg	Asp
			610			615					620				
Leu	Ala	Ser	Ala	Leu	Arg	Ser	Ala	Ala	Ala	Gly	Leu	Val	Ile	Pro	Ala
625					630					635					640
Ala	Arg	Arg	Val	Ser	Glu	Ala	Gly	Gly	Phe	His	Asp	Pro	Glu	Leu	Glu
				645					650					655	
Ser	Ser	Arg	Glu	Gln	Leu	Arg	Arg	His	Pro	Val	His	Thr	Ser	Pro	Gly
			660					665					670		
Leu	Glu	Asp	Gln	Ile	Arg	Gln	Ala	Glu	Arg	Tyr	Leu	Arg	Ile	Glu	Arg
			675				680					685			
Asp	Asn	Ala	Gln	Leu	Glu	Arg	Lys	Val	Ala	Ala	Ala	Thr	Asn	Ser	Leu
			690			695					700				
Ala	Arg	Thr	Phe	Asp	Arg	Phe	Val	Gly	Leu	Leu	Thr	Glu	Arg	Glu	Phe
705					710					715					720
Ile	Asp	Gly	Pro	Ala	Thr	Asp	Pro	Val	Val	Thr	Asp	Asp	Gly	Arg	Leu
				725				730						735	
Leu	Ala	Arg	Ile	Tyr	Ser	Glu	Ser	Asp	Leu	Leu	Val	Ala	Glu	Cys	Leu
			740					745					750		
Arg	Thr	Gly	Ala	Trp	Glu	Gly	Leu	Lys	Pro	Ala	Glu	Leu	Ala	Gly	Val
			755				760					765			
Val	Ser	Ala	Val	Val	Tyr	Glu	Thr	Arg	Gly	Gly	Asp	Gly	Gln	Gly	Ala
			770			775					780				
Pro	Phe	Gly	Ala	Asp	Val	Pro	Thr	Pro	Arg	Leu	Arg	Gln	Ala	Leu	Thr
785					790					795					800
Gln	Thr	Ser	Arg	Leu	Ser	Thr	Thr	Leu	Arg	Ala	Asp	Glu	Gln	Ala	His
				805				810						815	
Arg	Ile	Thr	Pro	Ser	Arg	Glu	Pro	Asp	Asp	Gly	Phe	Val	Arg	Val	Ile
			820					825					830		
Tyr	Arg	Trp	Ser	Arg	Thr	Gly	Asp	Leu	Ala	Ala	Ala	Leu	Ala	Ala	Ala
			835				840					845			

Asp Val Asn Gly Ser Gly Ser Pro Leu Leu Ala Gly Asp Phe Val Arg
 850 855 860
 Trp Cys Arg Gln Val Leu Asp Leu Leu Asp Gln Val Arg Asn Ala Ala
 865 870 875 880
 Pro Asn Pro Glu Leu Arg Ala Thr Ala Lys Arg Ala Ile Gly Asp Ile
 885 890 895
 Arg Arg Gly Val Val Ala Val Asp Ala Gly
 900 905

<210> 214
 <211> 1013
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 214
 Met Leu Val Leu His Gly Phe Trp Ser Asn Ser Gly Gly Met Arg Leu
 1 5 10 15
 Trp Ala Glu Asp Ser Asp Leu Leu Val Lys Ser Pro Ser Gln Ala Leu
 20 25 30
 Arg Ser Ala Arg Pro His Pro Phe Ala Ala Pro Ala Asp Leu Ile Ala
 35 40 45
 Gly Ile His Pro Gly Lys Pro Ala Thr Ala Val Leu Leu Leu Pro Ser
 50 55 60
 Leu Arg Ser Ala Pro Leu Asp Ser Pro Glu Leu Ile Arg Leu Ala Pro
 65 70 75 80
 Arg Pro Ala Ala Arg Thr Asp Pro Met Leu Leu Ala Trp Thr Val Pro
 85 90 95
 Val Val Asp Leu Asp Pro Thr Ala Ala Leu Ala Ala Phe Asp Gln Pro
 100 105 110
 Ala Pro Asp Val Arg Tyr Gly Ala Ser Val Asp Tyr Leu Ala Glu Leu
 115 120 125
 Ala Val Phe Ala Arg Glu Leu Val Glu Arg Gly Arg Val Leu Pro Gln
 130 135 140
 Leu Arg Arg Asp Thr His Gly Ala Ala Ala Cys Trp Arg Pro Val Leu
 145 150 155 160
 Gln Gly Arg Asp Val Val Ala Met Thr Ser Leu Val Ser Ala Met Pro
 165 170 175
 Pro Val Cys Arg Ala Glu Val Gly Gly His Asp Pro His Glu Leu Ala
 180 185 190
 Thr Ser Ala Leu Asp Ala Met Val Asp Ala Ala Val Arg Ala Ala Leu
 195 200 205
 Ser Pro Met Asp Leu Leu Pro Pro Arg Arg Gly Arg Ser Lys Arg His
 210 215 220
 Arg Ala Val Glu Ala Trp Leu Thr Ala Leu Thr Cys Pro Asp Gly Arg
 225 230 235 240
 Phe Asp Ala Glu Pro Asp Glu Leu Asp Ala Leu Ala Glu Ala Leu Arg
 245 250 255
 Pro Trp Asp Asp Val Gly Ile Gly Thr Val Gly Pro Ala Arg Ala Thr
 260 265 270
 Phe Arg Leu Ser Glu Val Glu Thr Glu Asn Glu Glu Thr Pro Ala Gly
 275 280 285
 Ser Leu Trp Arg Leu Glu Phe Leu Leu Gln Ser Thr Gln Asp Pro Ser
 290 295 300
 Leu Leu Val Pro Ala Glu Gln Ala Trp Asn Asp Asp Gly Ser Leu Arg
 305 310 315 320
 Arg Trp Leu Asp Arg Pro Gln Glu Leu Leu Leu Thr Glu Leu Gly Arg
 325 330 335

Ala	Ser	Arg	Ile	Phe	Pro	Glu	Leu	Val	Pro	Ala	Leu	Arg	Thr	Ala	Cys
			340					345					350		
Pro	Ser	Gly	Leu	Glu	Leu	Asp	Ala	Asp	Gly	Ala	Tyr	Arg	Phe	Leu	Ser
		355					360					365			
Gly	Thr	Ala	Ala	Val	Leu	Asp	Glu	Ala	Gly	Phe	Gly	Val	Leu	Leu	Pro
	370					375				380					
Ser	Trp	Trp	Asp	Arg	Arg	Arg	Lys	Leu	Gly	Leu	Val	Leu	Ser	Ala	Tyr
385				390					395						400
Thr	Pro	Val	Asp	Gly	Val	Val	Gly	Lys	Ala	Ser	Lys	Phe	Gly	Arg	Glu
			405					410						415	
Gln	Leu	Val	Glu	Phe	Arg	Trp	Glu	Leu	Ala	Val	Gly	Asp	Asp	Pro	Leu
		420					425					430			
Ser	Glu	Glu	Glu	Ile	Ala	Ala	Leu	Thr	Glu	Thr	Lys	Ser	Pro	Leu	Ile
	435						440				445				
Arg	Leu	Arg	Gly	Gln	Trp	Val	Ala	Leu	Asp	Thr	Glu	Gln	Met	Arg	Arg
	450					455				460					
Gly	Leu	Glu	Phe	Leu	Glu	Arg	Lys	Pro	Thr	Gly	Arg	Lys	Thr	Thr	Ala
465					470					475					480
Glu	Ile	Leu	Ala	Leu	Ala	Ala	Ser	His	Pro	Asp	Asp	Val	Asp	Thr	Pro
			485					490					495		
Leu	Glu	Val	Thr	Ala	Val	Arg	Ala	Asp	Gly	Trp	Leu	Gly	Asp	Leu	Leu
		500					505					510			
Ala	Gly	Ala	Ala	Ala	Ala	Ser	Leu	Gln	Pro	Leu	Asp	Pro	Pro	Asp	Gly
	515						520				525				
Phe	Thr	Ala	Thr	Leu	Arg	Pro	Tyr	Gln	Gln	Arg	Gly	Leu	Ala	Trp	Leu
	530					535				540					
Ala	Phe	Leu	Ser	Ser	Leu	Gly	Leu	Gly	Ser	Cys	Leu	Ala	Asp	Asp	Met
545					550				555						560
Gly	Leu	Gly	Lys	Thr	Val	Gln	Leu	Leu	Ala	Leu	Glu	Thr	Leu	Glu	Ser
			565					570					575		
Val	Gln	Arg	His	Gln	Asp	Arg	Gly	Val	Gly	Pro	Thr	Leu	Leu	Leu	Cys
		580					585					590			
Pro	Met	Ser	Leu	Val	Gly	Asn	Trp	Pro	Gln	Glu	Ala	Ala	Arg	Phe	Ala
	595					600					605				
Pro	Asn	Leu	Arg	Val	Tyr	Ala	His	His	Gly	Gly	Ala	Arg	Leu	His	Gly
	610					615				620					
Glu	Ala	Leu	Arg	Asp	His	Leu	Glu	Arg	Thr	Asp	Leu	Val	Val	Ser	Thr
625					630				635						640
Tyr	Thr	Thr	Ala	Thr	Arg	Asp	Ile	Asp	Glu	Leu	Ala	Glu	Tyr	Glu	Trp
			645					650					655		
Asn	Arg	Val	Val	Leu	Asp	Glu	Ala	Gln	Ala	Val	Lys	Asn	Ser	Leu	Ser
		660					665					670			
Arg	Ala	Ala	Lys	Ala	Val	Arg	Arg	Leu	Arg	Ala	Ala	His	Arg	Val	Ala
	675					680					685				
Leu	Thr	Gly	Thr	Pro	Met	Glu	Asn	Arg	Leu	Ala	Glu	Leu	Trp	Ser	Ile
	690					695				700					
Met	Asp	Phe	Leu	Asn	Pro	Gly	Leu	Leu	Gly	Ser	Ser	Glu	Arg	Phe	Arg
705				710					715						720
Thr	Arg	Tyr	Ala	Ile	Pro	Ile	Glu	Arg	His	Gly	His	Thr	Glu	Pro	Ala
			725				730						735		
Glu	Arg	Leu	Arg	Ala	Ser	Thr	Arg	Pro	Tyr	Ile	Leu	Arg	Arg	Leu	Lys
		740				745						750			
Thr	Asp	Pro	Ala	Ile	Ile	Asp	Asp	Leu	Pro	Glu	Lys	Ile	Glu	Ile	Lys
	755					760						765			
Gln	Tyr	Cys	Gln	Leu	Thr	Thr	Glu	Gln	Ala	Ser	Leu	Tyr	Gln	Ala	Val
	770					775					780				
Val	Ala	Asp	Met	Met	Glu	Lys	Ile	Glu	Asn	Thr	Glu	Gly	Ile	Glu	Arg


```

785              790              795              800
Arg Gly Asn Val Leu Ala Ala Met Ala Lys Leu Lys Gln Val Cys Asn
      805              810              815
His Pro Ala Gln Leu Leu His Asp Arg Ser Pro Val Gly Arg Arg Ser
      820              825              830
Gly Lys Val Ile Arg Leu Glu Glu Ile Leu Glu Glu Ile Leu Ala Glu
      835              840              845
Gly Asp Arg Val Leu Cys Phe Thr Gln Phe Thr Glu Phe Ala Glu Leu
      850              855              860
Leu Val Pro His Leu Ala Ala Arg Phe Gly Arg Ala Ala Arg Asp Ile
865              870              875              880
Ala Tyr Leu His Gly Gly Thr Pro Arg Lys Arg Arg Asp Glu Met Val
      885              890              895
Ala Arg Phe Gln Ser Gly Asp Gly Pro Pro Ile Phe Leu Leu Ser Leu
      900              905              910
Lys Ala Gly Gly Thr Gly Leu Asn Leu Thr Ala Ala Asn His Val Val
      915              920              925
His Leu Asp Arg Trp Trp Asn Pro Ala Val Glu Asn Gln Ala Thr Asp
      930              935              940
Arg Ala Phe Arg Ile Gly Gln Arg Arg Thr Val Gln Val Arg Lys Phe
945              950              955              960
Ile Cys Thr Gly Thr Leu Glu Glu Lys Ile Asp Glu Met Ile Glu Glu
      965              970              975
Lys Lys Ala Leu Ala Asp Leu Val Val Thr Asp Gly Glu Gly Trp Leu
      980              985              990
Thr Glu Leu Ser Thr Arg Asp Leu Arg Glu Val Phe Ala Leu Ser Glu
      995              1000              1005
Gly Ala Val Gly Glu
      1010

```

<210> 215

<211> 291

<212> PRT

<213> Mycobacterium tuberculosis

<400> 215

```

Val Thr Trp Pro Leu Pro Asp Arg Leu Ser Ile Asn Ser Leu Ser Gly
1              5              10              15
Thr Pro Ala Val Asp Leu Ser Ser Phe Thr Asp Phe Leu Arg Arg Gln
      20              25              30
Ala Pro Glu Leu Leu Pro Ala Ser Ile Ser Gly Gly Ala Pro Leu Ala
      35              40              45
Gly Gly Asp Ala Gln Leu Pro His Gly Thr Thr Ile Val Ala Leu Lys
      50              55              60
Tyr Pro Gly Gly Val Val Met Ala Gly Asp Arg Arg Ser Thr Gln Gly
65              70              75              80
Asn Met Ile Ser Gly Arg Asp Val Arg Lys Val Tyr Ile Thr Asp Asp
      85              90              95
Tyr Thr Ala Thr Gly Ile Ala Gly Thr Ala Ala Val Ala Val Glu Phe
      100              105              110
Ala Arg Leu Tyr Ala Val Glu Leu Glu His Tyr Glu Lys Leu Glu Gly
      115              120              125
Val Pro Leu Thr Phe Ala Gly Lys Ile Asn Arg Leu Ala Ile Met Val
      130              135              140
Arg Gly Asn Leu Ala Ala Met Gln Gly Leu Leu Ala Leu Pro Leu
145              150              155              160
Leu Ala Gly Tyr Asp Ile His Ala Ser Asp Pro Gln Ser Ala Gly Arg

```

Ile	Val	Ser	Phe	165	Asp	Ala	Ala	Gly	Gly	170	Trp	Asn	Ile	Glu	Glu	Glu	Gly	175
			180						185						190			
Tyr	Gln	Ala	Val	Gly	Ser	Gly	Ser	Leu	Phe	Ala	Lys	Ser	Ser	Met	Lys			
		195						200						205				
Lys	Leu	Tyr	Ser	Gln	Val	Thr	Asp	Gly	Asp	Ser	Gly	Leu	Arg	Val	Ala			
	210					215						220						
Val	Glu	Ala	Leu	Tyr	Asp	Ala	Ala	Asp	Asp	Asp	Ser	Ala	Thr	Gly	Gly			
225					230					235					240			
Pro	Asp	Leu	Val	Arg	Gly	Ile	Phe	Pro	Thr	Ala	Val	Ile	Ile	Asp	Ala			
				245					250					255				
Asp	Gly	Ala	Val	Asp	Val	Pro	Glu	Ser	Arg	Ile	Ala	Glu	Leu	Ala	Arg			
			260					265					270					
Ala	Ile	Ile	Glu	Ser	Arg	Ser	Gly	Ala	Asp	Thr	Phe	Gly	Ser	Asp	Gly			
		275					280					285						
Gly	Glu	Lys																
	290																	

<210> 216

<211> 280

<212> PRT

<213> Mycobacterium tuberculosis

<400> 216

Val	Ser	Ala	Thr	Gly	Pro	Phe	Ser	Ile	Gly	Glu	Arg	Val	Gln	Leu	Thr			
1				5					10					15				
Asp	Ala	Lys	Gly	Arg	Arg	Tyr	Thr	Met	Ser	Leu	Thr	Pro	Gly	Ala	Glu			
			20					25					30					
Phe	His	Thr	His	Arg	Gly	Ser	Ile	Ala	His	Asp	Ala	Val	Ile	Gly	Leu			
			35				40						45					
Glu	Gln	Gly	Ser	Val	Val	Lys	Ser	Ser	Asn	Gly	Ala	Leu	Phe	Leu	Val			
	50					55				60								
Leu	Arg	Pro	Leu	Leu	Val	Asp	Tyr	Val	Met	Ser	Met	Pro	Arg	Gly	Pro			
65					70				75					80				
Gln	Val	Ile	Tyr	Pro	Lys	Asp	Ala	Ala	Gln	Ile	Val	His	Glu	Gly	Asp			
				85					90				95					
Ile	Phe	Pro	Gly	Ala	Arg	Val	Leu	Glu	Ala	Gly	Ala	Gly	Ser	Gly	Ala			
			100					105					110					
Leu	Thr	Leu	Ser	Leu	Leu	Arg	Ala	Val	Gly	Pro	Ala	Gly	Gln	Val	Ile			
	115					120						125						
Ser	Tyr	Glu	Gln	Arg	Ala	Asp	His	Ala	Glu	His	Ala	Arg	Arg	Asn	Val			
	130					135					140							
Ser	Gly	Cys	Tyr	Gly	Gln	Pro	Pro	Asp	Asn	Trp	Arg	Leu	Val	Val	Ser			
145					150				155					160				
Asp	Leu	Ala	Asp	Ser	Glu	Leu	Pro	Asp	Gly	Ser	Val	Asp	Arg	Ala	Val			
			165						170					175				
Leu	Asp	Met	Leu	Ala	Pro	Trp	Glu	Val	Leu	Asp	Ala	Val	Ser	Arg	Leu			
		180						185					190					
Leu	Val	Ala	Gly	Gly	Val	Leu	Met	Val	Tyr	Val	Ala	Thr	Val	Thr	Gln			
	195						200					205						
Leu	Ser	Arg	Ile	Val	Glu	Ala	Leu	Arg	Ala	Lys	Gln	Cys	Trp	Thr	Glu			
	210					215					220							
Pro	Arg	Ala	Trp	Glu	Thr	Leu	Gln	Arg	Gly	Trp	Asn	Val	Val	Gly	Leu			
225					230					235				240				
Ala	Val	Arg	Pro	Gln	His	Ser	Met	Arg	Gly	His	Thr	Ala	Phe	Leu	Val			
				245					250					255				
Ala	Thr	Arg	Arg	Leu	Ala	Pro	Gly	Ala	Val	Ala	Pro	Ala	Pro	Leu	Gly			

260 265 270
 Arg Lys Arg Glu Gly Arg Asp Gly
 275 280

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<210> 217
<211> 118
<212> PRT
<213> Mycobacterium tuberculosis
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[illegible]

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<210> 218
<211> 96
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 218															
Leu	Val	Val	Phe	Phe	Gln	Ile	Leu	Gly	Phe	Ala	Leu	Phe	Ile	Phe	Trp
1				5					10					15	
Leu	Leu	Leu	Ile	Ala	Arg	Val	Val	Val	Glu	Phe	Ile	Arg	Ser	Phe	Ser
			20					25					30		
Arg	Asp	Trp	Arg	Pro	Thr	Gly	Val	Thr	Val	Val	Ile	Leu	Glu	Ile	Ile
		35				40						45			
Met	Ser	Ile	Thr	Asp	Pro	Pro	Val	Lys	Val	Leu	Arg	Arg	Leu	Ile	Pro
	50					55					60				
Gln	Leu	Thr	Ile	Gly	Ala	Val	Arg	Phe	Asp	Leu	Ser	Ile	Met	Val	Leu
65				70					75					80	
Leu	Leu	Val	Ala	Phe	Ile	Gly	Met	Gln	Leu	Ala	Phe	Gly	Ala	Ala	Ala
			85					90					95		

```
<210> 219
<211> 241
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 219																
Val	Asn	Ser	His	Cys	Ser	His	Thr	Phe	Ile	Thr	Asp	Asn	Arg	Ser	Pro	
1				5					10					15		
Arg	Ala	Arg	Arg	Gly	His	Ala	Met	Ser	Thr	Leu	His	Lys	Val	Lys	Ala	
				20				25					30			
Tyr	Phe	Gly	Met	Ala	Pro	Met	Glu	Asp	Tyr	Asp	Asp	Glu	Tyr	Tyr	Asp	

[illegible]

```
<210> 220
<211> 258
<212> PRT
<213> Mycobacterium tuberculosis
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<400>	220															
Met	Ala	Ala	Asp	Leu	Ser	Ala	Tyr	Pro	Asp	Arg	Glu	Ser	Glu	Leu	Thr	
1				5					10					15		
His	Ala	Leu	Ala	Ala	Met	Arg	Ser	Arg	Leu	Ala	Ala	Ala	Ala	Glu	Ala	
			20					25					30			
Ala	Gly	Arg	Asn	Val	Gly	Glu	Ile	Glu	Leu	Leu	Pro	Ile	Thr	Lys	Phe	
		35				40						45				
Phe	Pro	Ala	Thr	Asp	Val	Ala	Ile	Leu	Phe	Arg	Leu	Gly	Cys	Arg	Ser	
	50				55						60					
Val	Gly	Glu	Ser	Arg	Glu	Gln	Glu	Ala	Ser	Ala	Lys	Met	Ala	Glu	Leu	
65				70					75					80		
Asn	Arg	Leu	Leu	Ala	Ala	Ala	Glu	Leu	Gly	His	Ser	Gly	Gly	Val	His	
			85				90						95			
Trp	His	Met	Val	Gly	Arg	Ile	Gln	Arg	Asn	Lys	Ala	Gly	Ser	Leu	Ala	
			100				105						110			
Arg	Trp	Ala	His	Thr	Ala	His	Ser	Val	Asp	Ser	Ser	Arg	Leu	Val	Thr	
		115				120						125				
Ala	Leu	Asp	Arg	Ala	Val	Val	Ala	Ala	Leu	Ala	Glu	His	Arg	Arg	Gly	
	130				135						140					
Glu	Arg	Leu	Arg	Val	Tyr	Val	Gln	Val	Ser	Leu	Asp	Gly	Asp	Gly	Ser	
145				150					155					160		
Arg	Gly	Gly	Val	Asp	Ser	Thr	Thr	Pro	Gly	Ala	Val	Asp	Arg	Ile	Cys	
			165				170						175			
Ala	Gln	Val	Gln	Glu	Ser	Glu	Gly	Leu	Glu	Leu	Val	Gly	Leu	Met	Gly	

[illegible]

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<210> 221
<211> 379
<212> PRT
<213> Mycobacterium tuberculosis
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<2400> 221																
Met	Thr	Pro	Pro	His	Asn	Tyr	Leu	Ala	Val	Ile	Lys	Val	Val	Gly	Ile	
1				5					10					15		
Gly	Gly	Gly	Gly	Val	Asn	Ala	Val	Asn	Arg	Met	Ile	Glu	Gln	Gly	Leu	
			20					25					30			
Lys	Gly	Val	Glu	Phe	Ile	Ala	Ile	Asn	Thr	Asp	Ala	Gln	Ala	Leu	Leu	
		35					40					45				
Met	Ser	Asp	Ala	Asp	Val	Lys	Leu	Asp	Val	Gly	Arg	Asp	Ser	Thr	Arg	
	50					55					60					
Gly	Leu	Gly	Ala	Gly	Ala	Asp	Pro	Glu	Val	Gly	Arg	Lys	Ala	Ala	Glu	
65					70					75					80	
Asp	Ala	Lys	Asp	Glu	Ile	Glu	Glu	Leu	Leu	Arg	Gly	Ala	Asp	Met	Val	
				85					90					95		
Phe	Val	Thr	Ala	Gly	Glu	Gly	Gly	Gly	Thr	Gly	Thr	Gly	Gly	Ala	Pro	
			100					105					110			
Val	Val	Ala	Ser	Ile	Ala	Arg	Lys	Leu	Gly	Ala	Leu	Thr	Val	Gly	Val	
		115					120					125				
Val	Thr	Arg	Pro	Phe	Ser	Phe	Glu	Gly	Lys	Arg	Arg	Ser	Asn	Gln	Ala	
	130					135					140					
Glu	Asn	Gly	Ile	Ala	Ala	Leu	Arg	Glu	Ser	Cys	Asp	Thr	Leu	Ile	Val	
145					150					155					160	
Ile	Pro	Asn	Asp	Arg	Leu	Leu	Gln	Met	Gly	Asp	Ala	Ala	Val	Ser	Leu	
				165					170					175		
Met	Asp	Ala	Phe	Arg	Ser	Ala	Asp	Glu	Val	Leu	Leu	Asn	Gly	Val	Gln	
			180					185					190			
Gly	Ile	Thr	Asp	Leu	Ile	Thr	Thr	Pro	Gly	Leu	Ile	Asn	Val	Asp	Phe	
		195					200					205				
Ala	Asp	Val	Lys	Gly	Ile	Met	Ser	Gly	Ala	Gly	Thr	Ala	Leu	Met	Gly	
	210					215					220					
Ile	Gly	Ser	Ala	Arg	Gly	Glu	Gly	Arg	Ser	Leu	Lys	Ala	Ala	Glu	Ile	
225					230					235					240	
Ala	Ile	Asn	Ser	Pro	Leu	Leu	Glu	Ala	Ser	Met	Glu	Gly	Ala	Gln	Gly	
				245					250					255		
Val	Leu	Met	Ser	Ile	Ala	Gly	Gly	Ser	Asp	Leu	Gly	Leu	Phe	Glu	Ile	
		260						265					270			
Asn	Glu	Ala	Ala	Ser	Leu	Val	Gln	Asp	Ala	Ala	His	Pro	Asp	Ala	Asn	
		275					280					285				
Ile	Ile	Phe	Gly	Thr	Val	Ile	Asp	Asp	Ser	Leu	Gly	Asp	Glu	Val	Arg	
	290					295					300					
Val	Thr	Val	Ile	Ala	Ala	Gly	Phe	Asp	Val	Ser	Gly	Pro	Gly	Arg	Lys	

305					310					315				320	
Pro	Val	Met	Gly	Glu	Thr	Gly	Gly	Ala	His	Arg	Ile	Glu	Ser	Ala	Lys
				325					330					335	
Ala	Gly	Lys	Leu	Thr	Ser	Thr	Leu	Phe	Glu	Pro	Val	Asp	Ala	Val	Ser
			340					345					350		
Val	Pro	Leu	His	Thr	Asn	Gly	Ala	Thr	Leu	Ser	Ile	Gly	Gly	Asp	Asp
		355					360					365			
Asp	Asp	Val	Asp	Val	Pro	Pro	Phe	Met	Arg	Arg					
	370					375									

<210> 222

<211> 494

<212> PRT

<213> Mycobacterium tuberculosis

<400> 222

Val	Ser	Thr	Glu	Gln	Leu	Pro	Pro	Asp	Leu	Arg	Arg	Val	His	Met	Val
1				5					10				15		
Gly	Ile	Gly	Gly	Ala	Gly	Met	Ser	Gly	Ile	Ala	Arg	Ile	Leu	Leu	Asp
			20					25				30			
Arg	Gly	Gly	Leu	Val	Ser	Gly	Ser	Asp	Ala	Lys	Glu	Ser	Arg	Gly	Val
		35				40					45				
His	Ala	Leu	Arg	Ala	Arg	Gly	Ala	Leu	Ile	Arg	Ile	Gly	His	Asp	Ala
	50					55					60				
Ser	Ser	Leu	Asp	Leu	Leu	Pro	Gly	Gly	Ala	Thr	Ala	Val	Val	Thr	Thr
65					70					75					80
His	Ala	Ala	Ile	Pro	Lys	Thr	Asn	Pro	Glu	Leu	Val	Glu	Ala	Arg	Arg
				85					90					95	
Arg	Gly	Ile	Pro	Val	Val	Leu	Arg	Pro	Ala	Val	Leu	Ala	Lys	Leu	Met
			100					105					110		
Ala	Gly	Arg	Thr	Thr	Leu	Met	Val	Thr	Gly	Thr	His	Gly	Lys	Thr	Thr
		115					120					125			
Thr	Thr	Ser	Met	Leu	Ile	Val	Ala	Leu	Gln	His	Cys	Gly	Leu	Asp	Pro
		130				135					140				
Ser	Phe	Ala	Val	Gly	Gly	Glu	Leu	Gly	Glu	Ala	Gly	Thr	Asn	Ala	His
145				150					155					160	
His	Gly	Ser	Gly	Asp	Cys	Phe	Val	Ala	Glu	Ala	Asp	Glu	Ser	Asp	Gly
			165					170						175	
Ser	Leu	Leu	Gln	Tyr	Thr	Pro	His	Val	Ala	Val	Ile	Thr	Asn	Ile	Glu
			180					185					190		
Ser	Asp	His	Leu	Asp	Phe	Tyr	Gly	Ser	Val	Glu	Ala	Tyr	Val	Ala	Val
		195					200					205			
Phe	Asp	Ser	Phe	Val	Glu	Arg	Ile	Val	Pro	Gly	Gly	Ala	Leu	Val	Val
	210					215					220				
Cys	Thr	Asp	Asp	Pro	Gly	Gly	Ala	Ala	Leu	Ala	Gln	Arg	Ala	Thr	Glu
225					230					235				240	
Leu	Gly	Ile	Arg	Val	Leu	Arg	Tyr	Gly	Ser	Val	Pro	Gly	Glu	Thr	Met
			245						250					255	
Ala	Ala	Thr	Leu	Val	Ser	Trp	Gln	Gln	Gln	Gly	Val	Gly	Ala	Val	Ala
			260					265					270		
His	Ile	Arg	Leu	Ala	Ser	Glu	Leu	Ala	Thr	Ala	Gln	Gly	Pro	Arg	Val
	275						280					285			
Met	Arg	Leu	Ser	Val	Pro	Gly	Arg	His	Met	Ala	Leu	Asn	Ala	Leu	Gly
	290					295					300				
Ala	Leu	Leu	Ala	Ala	Val	Gln	Ile	Gly	Ala	Pro	Ala	Asp	Glu	Val	Leu
305					310				315						320
Asp	Gly	Leu	Ala	Gly	Phe	Glu	Gly	Val	Arg	Arg	Arg	Phe	Glu	Leu	Val

				325					330					335	
Gly	Thr	Cys	Gly	Val	Gly	Lys	Ala	Ser	Val	Arg	Val	Phe	Asp	Asp	Tyr
			340					345					350		
Ala	His	His	Pro	Thr	Glu	Ile	Ser	Ala	Thr	Leu	Ala	Ala	Ala	Arg	Met
		355					360					365			
Val	Leu	Glu	Gln	Gly	Asp	Gly	Gly	Arg	Cys	Met	Val	Val	Phe	Gln	Pro
		370				375					380				
His	Leu	Tyr	Ser	Arg	Thr	Lys	Ala	Phe	Ala	Ala	Glu	Phe	Gly	Arg	Ala
385					390					395					400
Leu	Asn	Ala	Ala	Asp	Glu	Val	Phe	Val	Leu	Asp	Val	Tyr	Gly	Ala	Arg
				405					410					415	
Glu	Gln	Pro	Leu	Ala	Gly	Val	Ser	Gly	Ala	Ser	Val	Ala	Glu	His	Val
			420					425				430			
Thr	Val	Pro	Met	Arg	Tyr	Val	Pro	Asp	Phe	Ser	Ala	Val	Ala	Gln	Gln
		435					440					445			
Val	Ala	Ala	Ala	Ala	Ser	Pro	Gly	Asp	Val	Ile	Val	Thr	Met	Gly	Ala
	450				455					460					
Gly	Asp	Val	Thr	Leu	Leu	Gly	Pro	Glu	Ile	Leu	Thr	Ala	Leu	Arg	Val
465					470					475					480
Arg	Ala	Asn	Arg	Ser	Ala	Pro	Gly	Arg	Pro	Gly	Val	Leu	Gly		
				485					490						

<210> 223

<211> 410

<212> PRT

<213> Mycobacterium tuberculosis

<400> 223

Val 1	Lys	Asp	Thr	Val 5	Ser	Gln	Pro	Ala	Gly 10	Gly	Arg	Gly	Ala	Thr 15	Ala
Pro	Arg	Pro	Ala 20	Asp	Ala	Ala	Ser 25	Pro	Ser	Cys	Gly	Ser 30	Ser	Pro	Ser
Ala	Asp 35	Ser	Val	Ser	Val	Val 40	Leu	Ala	Gly	Gly	Gly 45	Thr	Ala	Gly	His
Val 50	Glu	Pro	Ala	Met	Ala	Val 55	Ala	Asp	Ala	Leu	Val 60	Ala	Leu	Asp	Pro
Arg 65	Val	Arg	Ile	Thr 70	Ala	Leu	Gly	Thr	Leu	Arg 75	Gly	Leu	Glu	Thr 80	Arg
Leu	Val	Pro	Gln 85	Arg	Gly	Tyr	His	Leu 90	Glu	Leu	Ile	Thr 95	Ala	Val	Pro
Met	Pro	Arg 100	Lys	Pro	Gly	Gly	Asp 105	Leu	Ala	Arg	Leu 110	Pro	Ser	Arg	Val
Trp	Arg 115	Ala	Val	Arg	Glu	Ala	Arg 120	Asp	Val	Leu	Asp 125	Asp	Val	Asp	Ala
Asp 130	Val	Val	Val	Gly	Phe	Gly 135	Gly	Tyr	Val	Ala	Leu 140	Pro	Ala	Tyr	Leu
Ala 145	Ala	Arg	Gly	Leu 150	Pro	Leu	Pro	Pro	Arg	Arg 155	Arg	Arg	Arg	Ile 160	Pro
Val	Val	Ile	His 165	Glu	Ala	Asn	Ala 170	Arg	Ala	Gly	Leu 175	Ala	Asn	Arg	Val
Gly	Ala	His 180	Thr	Ala	Asp	Arg	Val 185	Leu	Ser	Ala	Val 190	Pro	Asp	Ser	Gly
Leu	Arg 195	Arg	Ala	Glu	Val	Val 200	Gly	Val	Pro	Val	Arg 205	Ala	Ser	Ile	Ala
Ala 210	Leu	Asp	Arg	Ala	Val	Leu 215	Arg	Ala	Glu	Ala 220	Arg	Ala	His	Phe	Gly
Phe	Pro	Asp	Asp	Ala	Arg	Val	Leu	Leu	Val	Phe	Gly	Gly	Ser	Gln	Gly

```

225          230          235          240
Ala Val Ser Leu Asn Arg Ala Val Ser Gly Ala Ala Ala Asp Leu Ala
          245          250          255
Ala Ala Gly Val Cys Val Leu His Ala His Gly Pro Gln Asn Val Leu
          260          265          270
Glu Leu Arg Arg Arg Ala Gln Gly Asp Pro Pro Tyr Val Ala Val Pro
          275          280          285
Tyr Leu Asp Arg Met Glu Leu Ala Tyr Ala Ala Ala Asp Leu Val Ile
          290          295          300
Cys Arg Ala Gly Ala Met Thr Val Ala Glu Val Ser Ala Val Gly Leu
305          310          315          320
Pro Ala Ile Tyr Val Pro Leu Pro Ile Gly Asn Gly Glu Gln Arg Leu
          325          330          335
Asn Ala Leu Pro Val Val Asn Ala Gly Gly Gly Met Val Val Ala Asp
          340          345          350
Ala Ala Leu Thr Pro Glu Leu Val Ala Arg Gln Val Ala Gly Leu Leu
          355          360          365
Thr Asp Pro Ala Arg Leu Ala Ala Met Thr Ala Ala Ala Ala Arg Val
          370          375          380
Gly His Arg Asp Ala Ala Gly Gln Val Ala Arg Ala Ala Leu Ala Val
385          390          395          400
Ala Thr Gly Ala Gly Ala Arg Thr Thr Thr
          405          410

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<210> 224

<211> 524

<212> PRT

<213> Mycobacterium tuberculosis

<400> 224

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Val Leu Thr Arg Leu Leu Arg Arg Gly Thr Ser Asp Thr Asp Gly Ser
 1          5          10          15
Gln Thr Arg Gly Ala Glu Pro Val Glu Gly Gln Arg Thr Gly Pro Glu
          20          25          30
Glu Ala Ser Asn Pro Gly Ser Ala Arg Pro Arg Thr Arg Phe Gly Ala
          35          40          45
Trp Leu Gly Arg Pro Met Thr Ser Phe His Leu Ile Ile Ala Val Ala
          50          55          60
Ala Leu Leu Thr Thr Leu Gly Leu Ile Met Val Leu Ser Ala Ser Ala
65          70          75          80
Val Arg Ser Tyr Asp Asp Asp Gly Ser Ala Trp Val Ile Phe Gly Lys
          85          90          95
Gln Val Leu Trp Thr Leu Val Gly Leu Ile Gly Gly Tyr Val Cys Leu
          100          105          110
Arg Met Ser Val Arg Phe Met Arg Arg Ile Ala Phe Ser Gly Phe Ala
          115          120          125
Ile Thr Ile Val Met Leu Val Leu Val Leu Val Pro Gly Ile Gly Lys
          130          135          140
Glu Ala Asn Gly Ser Arg Gly Trp Phe Val Val Ala Gly Phe Ser Met
145          150          155          160
Gln Pro Ser Glu Leu Ala Lys Met Ala Phe Ala Ile Trp Gly Ala His
          165          170          175
Leu Leu Ala Ala Arg Arg Met Glu Arg Ala Ser Leu Arg Glu Met Leu
          180          185          190
Ile Pro Leu Val Pro Ala Ala Val Val Ala Leu Ala Leu Ile Val Ala
          195          200          205
Gln Pro Asp Leu Gly Gln Thr Val Ser Met Gly Ile Ile Leu Leu Gly

```


210		215		220
Leu Leu Trp Tyr Ala Gly Leu Pro Leu Arg Val Phe Leu Ser Ser Leu				
225		230		235
Ala Ala Val Val Val Ser Ala Ala Ile Leu Ala Val Ser Ala Gly Tyr				240
	245		250	255
Arg Ser Asp Arg Val Arg Ser Trp Leu Asn Pro Glu Asn Asp Pro Gln				
	260		265	270
Asp Ser Gly Tyr Gln Ala Arg Gln Ala Lys Phe Ala Leu Ala Gln Gly				
	275		280	285
Gly Ile Phe Gly Asp Gly Leu Gly Gln Gly Val Ala Lys Trp Asn Tyr				
	290		295	300
Leu Pro Asn Ala His Asn Asp Phe Ile Phe Ala Ile Ile Gly Glu Glu				
305		310		315
Leu Gly Leu Val Gly Ala Leu Gly Leu Leu Gly Leu Phe Gly Leu Phe				
	325		330	335
Ala Tyr Thr Gly Met Arg Ile Ala Ser Arg Ser Ala Asp Pro Phe Leu				
	340		345	350
Arg Leu Leu Thr Ala Thr Thr Thr Leu Trp Val Leu Gly Gln Ala Phe				
	355		360	365
Ile Asn Ile Gly Tyr Val Ile Gly Leu Leu Pro Val Thr Gly Leu Gln				
	370		375	380
Leu Pro Leu Ile Ser Ala Gly Gly Thr Ser Thr Ala Ala Thr Leu Ser				
385		390		395
Leu Ile Gly Ile Ile Ala Asn Ala Ala Arg His Glu Pro Glu Ala Val				
	405		410	415
Ala Ala Leu Arg Ala Gly Arg Asp Asp Lys Val Asn Arg Leu Leu Arg				
	420		425	430
Leu Pro Leu Pro Glu Pro Tyr Leu Pro Pro Arg Leu Glu Ala Phe Arg				
	435		440	445
Asp Arg Lys Arg Ala Asn Pro Gln Pro Ala Gln Thr Gln Pro Ala Arg				
	450		455	460
Lys Thr Pro Arg Thr Ala Pro Gly Gln Pro Ala Arg Gln Met Gly Leu				
465		470		475
Pro Pro Arg Pro Gly Ser Pro Arg Thr Ala Asp Pro Pro Val Arg Arg				
	485		490	495
Ser Val His His Gly Ala Gly Gln Arg Tyr Ala Gly Gln Arg Arg Thr				
	500		505	510
Arg Arg Val Arg Ala Leu Glu Gly Gln Arg Tyr Gly				
	515		520	

<210> 225

<211> 486

<212> PRT

<213> Mycobacterium tuberculosis

<400> 225

Val Leu Asp Pro Leu Gly Pro Gly Ala Pro Val Leu Val Ala Gly Gly				
1		5		10
Arg Val Thr Gly Gln Ala Val Ala Ala Val Leu Thr Arg Phe Gly Ala				
	20		25	30
Thr Pro Thr Val Cys Asp Asp Asp Pro Val Met Leu Arg Pro His Ala				
	35		40	45
Glu Arg Gly Leu Pro Thr Val Ser Ser Ser Asp Ala Val Gln Gln Ile				
	50		55	60
Thr Gly Tyr Ala Leu Val Val Ala Ser Pro Gly Phe Ser Pro Ala Thr				
65		70		75
Pro Leu Leu Ala Ala Ala Ala Ala Ala Gly Val Pro Ile Trp Gly Asp				80

				85					90					95			
Val	Glu	Leu	Ala	Trp	Arg	Leu	Asp	Ala	Ala	Gly	Cys	Tyr	Gly	Pro	Pro		
			100					105					110				
Arg	Ser	Trp	Leu	Val	Val	Thr	Gly	Thr	Asn	Gly	Lys	Thr	Thr	Thr	Thr		
		115					120					125					
Ser	Met	Leu	His	Ala	Met	Leu	Ile	Ala	Gly	Gly	Arg	Arg	Ala	Val	Leu		
	130					135					140						
Cys	Gly	Asn	Ile	Gly	Ser	Ala	Val	Leu	Asp	Val	Leu	Asp	Glu	Pro	Ala		
145					150					155					160		
Glu	Leu	Leu	Ala	Val	Glu	Leu	Ser	Ser	Phe	Gln	Leu	His	Trp	Ala	Pro		
				165					170					175			
Ser	Leu	Arg	Pro	Glu	Ala	Gly	Ala	Val	Leu	Asn	Ile	Ala	Glu	Asp	His		
			180					185					190				
Leu	Asp	Trp	His	Ala	Thr	Met	Ala	Glu	Tyr	Thr	Ala	Ala	Lys	Ala	Arg		
	195						200					205					
Val	Leu	Thr	Gly	Gly	Val	Ala	Val	Ala	Gly	Leu	Asp	Asp	Ser	Arg	Ala		
	210					215					220						
Ala	Ala	Leu	Leu	Asp	Gly	Ser	Pro	Ala	Gln	Val	Arg	Val	Gly	Phe	Arg		
225					230				235						240		
Leu	Gly	Glu	Pro	Ala	Ala	Arg	Glu	Leu	Gly	Val	Arg	Asp	Ala	His	Leu		
				245					250					255			
Val	Asp	Arg	Ala	Phe	Ser	Asp	Asp	Leu	Thr	Leu	Leu	Pro	Val	Ala	Ser		
		260					265						270				
Ile	Pro	Val	Pro	Gly	Pro	Val	Gly	Val	Leu	Asp	Ala	Leu	Ala	Ala	Ala		
	275						280						285				
Ala	Leu	Ala	Arg	Ser	Val	Gly	Val	Pro	Ala	Gly	Ala	Ile	Ala	Asp	Ala		
	290					295					300						
Val	Thr	Ser	Phe	Arg	Val	Gly	Arg	His	Arg	Ala	Glu	Val	Val	Ala	Val		
305					310					315					320		
Ala	Asp	Gly	Ile	Thr	Tyr	Val	Asp	Asp	Ser	Lys	Ala	Thr	Asn	Pro	His		
				325					330					335			
Ala	Ala	Arg	Ala	Ser	Val	Leu	Ala	Tyr	Pro	Arg	Val	Val	Trp	Ile	Ala		
			340					345					350				
Gly	Gly	Leu	Leu	Lys	Gly	Ala	Ser	Leu	His	Ala	Glu	Val	Ala	Ala	Met		
	355					360						365					
Ala	Ser	Arg	Leu	Val	Gly	Ala	Val	Leu	Ile	Gly	Arg	Asp	Arg	Ala	Ala		
	370				375						380						
Val	Ala	Glu	Ala	Leu	Ser	Arg	His	Ala	Pro	Asp	Val	Pro	Val	Val	Gln		
385					390					395					400		
Val	Val	Ala	Gly	Glu	Asp	Thr	Gly	Met	Pro	Ala	Thr	Val	Glu	Val	Pro		
				405					410					415			
Val	Ala	Cys	Val	Leu	Asp	Val	Ala	Lys	Asp	Asp	Lys	Ala	Gly	Glu	Thr		
			420					425					430				
Val	Gly	Ala	Ala	Val	Met	Thr	Ala	Ala	Val	Ala	Ala	Ala	Arg	Arg	Met		
	435						440					445					
Ala	Gln	Pro	Gly	Asp	Thr	Val	Leu	Leu	Ala	Pro	Ala	Gly	Ala	Ser	Phe		
	450					455					460						
Asp	Gln	Phe	Thr	Gly	Tyr	Ala	Asp	Arg	Gly	Glu	Ala	Phe	Ala	Thr	Ala		
465					470					475					480		
Val	Arg	Ala	Val	Ile	Arg												
				485													

<210> 226

<211> 359

<212> PRT

<213> Mycobacterium tuberculosis

<400> 226

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Met Arg Gln Ile Leu Ile Ala Val Ala Val Ala Val Thr Val Ser Ile
 1           5           10           15
Leu Leu Thr Pro Val Leu Ile Arg Leu Phe Thr Lys Gln Gly Phe Gly
      20           25           30
His Gln Ile Arg Glu Asp Gly Pro Pro Ser His His Thr Lys Arg Gly
      35           40           45
Thr Pro Ser Met Gly Gly Val Ala Ile Leu Ala Gly Ile Trp Ala Gly
      50           55           60
Tyr Leu Gly Ala His Leu Ala Gly Leu Ala Phe Asp Gly Glu Gly Ile
65           70           75           80
Gly Ala Ser Gly Leu Leu Val Leu Gly Leu Ala Thr Ala Leu Gly Gly
      85           90           95
Val Gly Phe Ile Asp Asp Leu Ile Lys Ile Arg Arg Ser Arg Asn Leu
      100          105          110
Gly Leu Asn Lys Thr Ala Lys Thr Val Gly Gln Ile Thr Ser Ala Val
      115          120          125
Leu Phe Gly Val Leu Val Leu Gln Phe Arg Asn Ala Ala Gly Leu Thr
      130          135          140
Pro Gly Ser Ala Asp Leu Ser Tyr Val Arg Glu Ile Ala Thr Val Thr
145           150           155           160
Leu Ala Pro Val Leu Phe Val Leu Phe Cys Val Val Ile Val Ser Ala
      165          170          175
Trp Ser Asn Ala Val Asn Phe Thr Asp Gly Leu Asp Gly Leu Ala Ala
      180          185          190
Gly Thr Met Ala Met Val Thr Ala Ala Tyr Val Leu Ile Thr Phe Trp
      195          200          205
Gln Tyr Arg Asn Ala Cys Val Thr Ala Pro Gly Leu Gly Cys Tyr Asn
      210          215          220
Val Arg Asp Pro Leu Asp Leu Ala Leu Ile Ala Ala Ala Thr Ala Gly
225           230           235           240
Ala Cys Ile Gly Phe Leu Trp Trp Asn Ala Ala Pro Ala Lys Ile Phe
      245          250          255
Met Gly Asp Thr Gly Ser Leu Ala Leu Gly Gly Val Ile Ala Gly Leu
      260          265          270
Ser Val Thr Ser Arg Thr Glu Ile Leu Ala Val Val Leu Gly Ala Leu
      275          280          285
Phe Val Ala Glu Ile Thr Ser Val Val Leu Gln Ile Leu Thr Phe Arg
      290          295          300
Thr Thr Gly Arg Arg Met Phe Arg Met Ala Pro Phe His His His Phe
305           310           315           320
Glu Leu Val Gly Trp Ala Glu Thr Thr Val Ile Ile Arg Phe Trp Leu
      325          330          335
Leu Thr Ala Ile Thr Cys Gly Leu Gly Val Ala Leu Phe Tyr Gly Glu
      340          345          350
Trp Leu Ala Ala Val Gly Ala
      355

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<210> 227

<211> 510

<212> PRT

<213> Mycobacterium tuberculosis

<400> 227

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Met Ile Glu Leu Thr Val Ala Gln Ile Ala Glu Ile Val Gly Gly Ala
 1           5           10           15
Val Ala Asp Ile Ser Pro Gln Asp Ala Ala His Arg Arg Val Thr Gly

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			20					25				30					
Thr	Val	Glu	Phe	Asp	Ser	Arg	Ala	Ile	Gly	Pro	Gly	Gly	Leu	Phe	Leu		
		35					40					45					
Ala	Leu	Pro	Gly	Ala	Arg	Ala	Asp	Gly	His	Asp	His	Ala	Ala	Ser	Ala		
		50				55					60						
Val	Ala	Ala	Gly	Ala	Ala	Val	Val	Leu	Ala	Ala	Arg	Pro	Val	Gly	Val		
65					70					75					80		
Pro	Ala	Ile	Val	Val	Pro	Pro	Val	Ala	Ala	Pro	Asn	Val	Leu	Ala	Gly		
				85					90					95			
Val	Leu	Glu	His	Asp	Asn	Asp	Gly	Ser	Gly	Ala	Ala	Val	Leu	Ala	Ala		
			100					105					110				
Leu	Ala	Lys	Leu	Ala	Thr	Ala	Val	Ala	Ala	Gln	Leu	Val	Ala	Gly	Gly		
		115					120					125					
Leu	Thr	Ile	Ile	Gly	Ile	Thr	Gly	Ser	Ser	Gly	Lys	Thr	Ser	Thr	Lys		
	130					135					140						
Asp	Leu	Met	Ala	Ala	Val	Leu	Ala	Pro	Leu	Gly	Glu	Val	Val	Ala	Pro		
145					150					155					160		
Pro	Gly	Ser	Phe	Asn	Asn	Glu	Leu	Gly	His	Pro	Trp	Thr	Val	Leu	Arg		
				165					170					175			
Ala	Thr	Arg	Arg	Thr	Asp	Tyr	Leu	Ile	Leu	Glu	Met	Ala	Ala	Arg	His		
			180					185					190				
His	Gly	Asn	Ile	Ala	Ala	Leu	Ala	Glu	Ile	Ala	Pro	Pro	Ser	Ile	Gly		
	195					200					205						
Val	Val	Leu	Asn	Val	Gly	Thr	Ala	His	Leu	Gly	Glu	Phe	Gly	Ser	Arg		
	210				215					220							
Glu	Val	Ile	Ala	Gln	Thr	Lys	Ala	Glu	Leu	Pro	Gln	Ala	Val	Pro	His		
225					230				235						240		
Ser	Gly	Ala	Val	Val	Leu	Asn	Ala	Asp	Asp	Pro	Ala	Val	Ala	Ala	Met		
				245				250						255			
Ala	Lys	Leu	Thr	Ala	Ala	Arg	Val	Val	Arg	Val	Ser	Arg	Asp	Asn	Thr		
			260					265					270				
Gly	Asp	Val	Trp	Ala	Gly	Pro	Val	Ser	Leu	Asp	Glu	Leu	Ala	Arg	Pro		
		275				280					285						
Arg	Phe	Thr	Leu	His	Ala	His	Asp	Ala	Gln	Ala	Glu	Val	Arg	Leu	Gly		
	290					295					300						
Val	Cys	Gly	Asp	His	Gln	Val	Thr	Asn	Ala	Leu	Cys	Ala	Ala	Ala	Val		
305					310					315					320		
Ala	Leu	Glu	Cys	Gly	Ala	Ser	Val	Glu	Gln	Val	Ala	Ala	Ala	Leu	Thr		
				325					330					335			
Ala	Ala	Pro	Pro	Val	Ser	Arg	His	Arg	Met	Gln	Val	Thr	Thr	Arg	Gly		
			340					345					350				
Asp	Gly	Val	Thr	Val	Ile	Asp	Asp	Ala	Tyr	Asn	Ala	Asn	Pro	Asp	Ser		
		355					360					365					
Met	Arg	Ala	Gly	Leu	Gln	Ala	Leu	Ala	Trp	Ile	Ala	His	Gln	Pro	Glu		
	370					375					380						
Ala	Thr	Arg	Arg	Ser	Trp	Ala	Val	Leu	Gly	Glu	Met	Ala	Glu	Leu	Gly		
385					390					395					400		
Glu	Asp	Ala	Ile	Ala	Glu	His	Asp	Arg	Ile	Gly	Arg	Leu	Ala	Val	Arg		
				405					410					415			
Leu	Asp	Val	Ser	Arg	Leu	Val	Val	Val	Gly	Thr	Gly	Arg	Ser	Ile	Ser		
			420					425					430				
Ala	Met	His	His	Gly	Ala	Val	Leu	Glu	Gly	Ala	Trp	Gly	Ser	Gly	Glu		
	435						440					445					
Ala	Thr	Ala	Asp	His	Gly	Ala	Asp	Arg	Thr	Ala	Val	Asn	Val	Ala	Asp		
	450					455					460						
Gly	Asp	Ala	Ala	Leu	Ala	Leu	Leu	Arg	Ala	Glu	Leu	Arg	Pro	Gly	Asp		
465					470					475					480		

Val	Val	Leu	Val	Lys	Ala	Ser	Asn	Ala	Ala	Gly	Leu	Gly	Ala	Val	Ala
				485					490					495	
Asp	Ala	Leu	Val	Ala	Asp	Asp	Thr	Cys	Gly	Ser	Val	Arg	Pro		
			500					505					510		

<210> 228

<211> 535

<212> PRT

<213> Mycobacterium tuberculosis

<400> 228

Val	Ser	Ser	Leu	Ala	Arg	Gly	Ile	Ser	Arg	Arg	Arg	Thr	Glu	Val	Ala
1				5					10					15	
Thr	Gln	Val	Glu	Ala	Ala	Pro	Thr	Gly	Leu	Arg	Pro	Asn	Ala	Val	Val
			20					25					30		
Gly	Val	Arg	Leu	Ala	Ala	Leu	Ala	Asp	Gln	Val	Gly	Ala	Ala	Leu	Ala
		35					40					45			
Glu	Gly	Pro	Ala	Gln	Arg	Ala	Val	Thr	Glu	Asp	Arg	Thr	Val	Thr	Gly
		50				55					60				
Val	Thr	Leu	Arg	Ala	Gln	Asp	Val	Ser	Pro	Gly	Asp	Leu	Phe	Ala	Ala
65					70					75					80
Leu	Thr	Gly	Ser	Thr	Thr	His	Gly	Ala	Arg	His	Val	Gly	Asp	Ala	Ile
				85					90					95	
Ala	Arg	Gly	Ala	Val	Ala	Val	Leu	Thr	Asp	Pro	Ala	Gly	Val	Ala	Glu
			100					105					110		
Ile	Ala	Gly	Arg	Ala	Ala	Val	Pro	Val	Leu	Val	His	Pro	Ala	Pro	Arg
		115					120					125			
Gly	Val	Leu	Gly	Gly	Leu	Ala	Ala	Thr	Val	Tyr	Gly	His	Pro	Ser	Glu
		130				135					140				
Arg	Leu	Thr	Val	Ile	Gly	Ile	Thr	Gly	Thr	Ser	Gly	Lys	Thr	Thr	Thr
145					150					155					160
Thr	Tyr	Leu	Val	Glu	Ala	Gly	Leu	Arg	Ala	Ala	Gly	Arg	Val	Ala	Gly
				165					170					175	
Leu	Ile	Gly	Thr	Ile	Gly	Ile	Arg	Val	Gly	Gly	Ala	Asp	Leu	Pro	Ser
			180					185					190		
Ala	Leu	Thr	Thr	Pro	Glu	Ala	Pro	Thr	Leu	Gln	Ala	Met	Leu	Ala	Ala
		195					200					205			
Met	Val	Glu	Arg	Gly	Val	Asp	Thr	Val	Val	Met	Glu	Val	Ser	Ser	His
	210					215					220				
Ala	Leu	Ala	Leu	Gly	Arg	Val	Asp	Gly	Thr	Arg	Phe	Ala	Val	Gly	Ala
				230						235					240
Phe	Thr	Asn	Leu	Ser	Arg	Asp	His	Leu	Asp	Phe	His	Pro	Ser	Met	Ala
				245					250					255	
Asp	Tyr	Phe	Glu	Ala	Lys	Ala	Ser	Leu	Phe	Asp	Pro	Asp	Ser	Ala	Leu
			260					265					270		
Arg	Ala	Arg	Thr	Ala	Val	Val	Cys	Ile	Asp	Asp	Asp	Ala	Gly	Arg	Ala
			275				280					285			
Met	Ala	Ala	Arg	Ala	Ala	Asp	Ala	Ile	Thr	Val	Ser	Ala	Ala	Asp	Arg
			290			295					300				
Pro	Ala	His	Trp	Arg	Ala	Thr	Asp	Val	Ala	Pro	Thr	Asp	Ala	Gly	Gly
305					310					315					320
Gln	Gln	Phe	Thr	Ala	Ile	Asp	Pro	Ala	Gly	Val	Gly	His	His	Ile	Gly
				325					330					335	
Ile	Arg	Leu	Pro	Gly	Arg	Tyr	Asn	Val	Ala	Asn	Cys	Leu	Val	Ala	Leu
			340					345					350		
Ala	Ile	Leu	Asp	Thr	Val	Gly	Val	Ser	Pro	Glu	Gln	Ala	Val	Pro	Gly
			355				360					365			

Leu Arg Glu Ile Arg Val Pro Gly Arg Leu Glu Gln Ile Asp Arg Gly
 370 375 380
 Gln Gly Phe Leu Ala Leu Val Asp Tyr Ala His Lys Pro Glu Ala Leu
 385 390 395 400
 Arg Ser Val Leu Thr Thr Leu Ala His Pro Asp Arg Arg Leu Ala Val
 405 410 415
 Val Phe Gly Ala Gly Gly Asp Arg Asp Pro Gly Lys Arg Ala Pro Met
 420 425 430
 Gly Arg Ile Ala Ala Gln Leu Ala Asp Leu Val Val Val Thr Asp Asp
 435 440 445
 Asn Pro Arg Asp Glu Asp Pro Thr Ala Ile Arg Arg Glu Ile Leu Ala
 450 455 460
 Gly Ala Ala Glu Val Gly Gly Asp Ala Gln Val Val Glu Ile Ala Asp
 465 470 475 480
 Arg Arg Asp Ala Ile Arg His Ala Val Ala Trp Ala Arg Pro Gly Asp
 485 490 495
 Val Val Leu Ile Ala Gly Lys Gly His Glu Thr Gly Gln Arg Gly Gly
 500 505 510
 Gly Arg Val Arg Pro Phe Asp Asp Arg Val Glu Leu Ala Ala Ala Leu
 515 520 525
 Glu Ala Leu Glu Arg Arg Ala
 530 535

<210> 229

<211> 344

<212> PRT

<213> Mycobacterium tuberculosis

<400> 229

Met Lys Phe Val Asn His Ile Glu Pro Val Ala Pro Arg Arg Ala Gly
 1 5 10 15
 Gly Ala Val Ala Glu Val Tyr Ala Glu Ala Arg Arg Glu Phe Gly Arg
 20 25 30
 Leu Pro Glu Pro Leu Ala Met Leu Ser Pro Asp Glu Gly Leu Leu Thr
 35 40 45
 Ala Gly Trp Ala Thr Leu Arg Glu Thr Leu Leu Val Gly Gln Val Pro
 50 55 60
 Arg Gly Arg Lys Glu Ala Val Ala Ala Val Ala Ala Ser Leu Arg
 65 70 75 80
 Cys Pro Trp Cys Val Asp Ala His Thr Thr Met Leu Tyr Ala Ala Gly
 85 90 95
 Gln Thr Asp Thr Ala Ala Ala Ile Leu Ala Gly Thr Ala Pro Ala Ala
 100 105 110
 Gly Asp Pro Asn Ala Pro Tyr Val Ala Trp Ala Ala Gly Thr Gly Thr
 115 120 125
 Pro Ala Gly Pro Pro Ala Pro Phe Gly Pro Asp Val Ala Ala Glu Tyr
 130 135 140
 Leu Gly Thr Ala Val Gln Phe His Phe Ile Ala Arg Leu Val Leu Val
 145 150 155 160
 Leu Leu Asp Glu Thr Phe Leu Pro Gly Gly Pro Arg Ala Gln Gln Leu
 165 170 175
 Met Arg Arg Ala Gly Gly Leu Val Phe Ala Arg Lys Val Arg Ala Glu
 180 185 190
 His Arg Pro Gly Arg Ser Thr Arg Arg Leu Glu Pro Arg Thr Leu Pro
 195 200 205
 Asp Asp Leu Ala Trp Ala Thr Pro Ser Glu Pro Ile Ala Thr Ala Phe
 210 215 220

Ala Ala Leu Ser His His Leu Asp Thr Ala Pro His Leu Pro Pro Pro
 225 230 235 240
 Thr Arg Gln Val Val Arg Arg Val Val Gly Ser Trp His Gly Glu Pro
 245 250 255
 Met Pro Met Ser Ser Arg Trp Thr Asn Glu His Thr Ala Glu Leu Pro
 260 265 270
 Ala Asp Leu His Ala Pro Thr Arg Leu Ala Leu Leu Thr Gly Leu Ala
 275 280 285
 Pro His Gln Val Thr Asp Asp Asp Val Ala Ala Ala Arg Ser Leu Leu
 290 295 300
 Asp Thr Asp Ala Ala Leu Val Gly Ala Leu Ala Trp Ala Ala Phe Thr
 305 310 315 320
 Ala Ala Arg Arg Ile Gly Thr Trp Ile Gly Ala Ala Ala Glu Gly Gln
 325 330 335
 Val Ser Arg Gln Asn Pro Thr Gly
 340

<210> 230

<211> 679

<212> PRT

<213> Mycobacterium tuberculosis

<400> 230

Val Ser Arg Ala Ala Pro Arg Arg Ala Ser Gln Ser Gln Ser Thr Arg
 1 5 10 15
 Pro Ala Arg Gly Leu Arg Arg Pro Pro Gly Ala Gln Glu Val Gly Gln
 20 25 30
 Arg Lys Arg Pro Gly Lys Thr Gln Lys Ala Arg Gln Ala Gln Glu Ala
 35 40 45
 Thr Lys Ser Arg Pro Ala Thr Arg Ser Asp Val Ala Pro Ala Gly Arg
 50 55 60
 Ser Thr Arg Ala Arg Arg Thr Arg Gln Val Val Asp Val Gly Thr Arg
 65 70 75 80
 Gly Ala Ser Phe Val Phe Arg His Arg Thr Gly Asn Ala Val Ile Leu
 85 90 95
 Val Leu Met Leu Val Ala Ala Thr Gln Leu Phe Phe Leu Gln Val Ser
 100 105 110
 His Ala Ala Gly Leu Arg Ala Gln Ala Ala Gly Gln Leu Lys Val Thr
 115 120 125
 Asp Val Gln Pro Ala Ala Arg Gly Ser Ile Val Asp Arg Asn Asn Asp
 130 135 140
 Arg Leu Ala Phe Thr Ile Glu Ala Arg Ala Leu Thr Phe Gln Pro Lys
 145 150 155 160
 Arg Ile Arg Arg Gln Leu Glu Glu Ala Arg Lys Lys Thr Ser Ala Ala
 165 170 175
 Pro Asp Pro Gln Gln Arg Leu Arg Asp Ile Ala Gln Glu Val Ala Gly
 180 185 190
 Lys Leu Asn Asn Lys Pro Asp Ala Ala Ala Val Leu Lys Lys Leu Gln
 195 200 205
 Ser Asp Glu Thr Phe Val Tyr Leu Ala Arg Ala Val Asp Pro Ala Val
 210 215 220
 Ala Ser Ala Ile Cys Ala Lys Tyr Pro Glu Val Gly Ala Glu Arg Gln
 225 230 235 240
 Asp Leu Arg Gln Tyr Pro Gly Gly Ser Leu Ala Ala Asn Val Val Gly
 245 250 255
 Gly Ile Asp Trp Asp Gly His Gly Leu Gly Leu Glu Asp Ser Leu
 260 265 270

Asp Ala Val Leu Ala Gly Thr Asp Gly Ser Val Thr Tyr Asp Arg Gly
 275 280 285
 Ser Asp Gly Val Val Ile Pro Gly Ser Tyr Arg Asn Arg His Lys Ala
 290 295 300
 Val His Gly Ser Thr Val Val Leu Thr Leu Asp Asn Asp Ile Gln Phe
 305 310 315 320
 Tyr Val Gln Gln Gln Val Gln Gln Ala Lys Asn Leu Ser Gly Ala His
 325 330 335
 Asn Val Ser Ala Val Val Leu Asp Ala Lys Thr Gly Glu Val Leu Ala
 340 345 350
 Met Ala Asn Asp Asn Thr Phe Asp Pro Ser Gln Asp Ile Gly Arg Gln
 355 360 365
 Gly Asp Lys Gln Leu Gly Asn Pro Ala Val Ser Ser Pro Phe Glu Pro
 370 375 380
 Gly Ser Val Asn Lys Ile Val Ala Ala Ser Ala Val Ile Glu His Gly
 385 390 395 400
 Leu Ser Ser Pro Asp Glu Val Leu Gln Val Pro Gly Ser Ile Gln Met
 405 410 415
 Gly Gly Val Thr Val His Asp Ala Trp Glu His Gly Val Met Pro Tyr
 420 425 430
 Thr Thr Thr Gly Val Phe Gly Lys Ser Ser Asn Val Gly Thr Leu Met
 435 440 445
 Leu Ser Gln Arg Val Gly Pro Glu Arg Tyr Tyr Asp Met Leu Arg Lys
 450 455 460
 Phe Gly Leu Gly Gln Arg Thr Gly Val Gly Leu Pro Gly Glu Ser Ala
 465 470 475 480
 Gly Leu Val Pro Pro Ile Asp Gln Trp Ser Gly Ser Thr Phe Ala Asn
 485 490 495
 Leu Pro Ile Gly Gln Gly Leu Ser Met Thr Leu Leu Gln Met Thr Gly
 500 505 510
 Met Tyr Gln Ala Ile Ala Asn Asp Gly Val Arg Val Pro Pro Arg Ile
 515 520 525
 Ile Lys Ala Thr Val Ala Pro Asp Gly Ser Arg Thr Glu Glu Pro Arg
 530 535 540
 Pro Asp Asp Ile Arg Val Val Ser Ala Gln Thr Ala Gln Thr Val Arg
 545 550 555 560
 Gln Met Leu Arg Ala Val Val Gln Arg Asp Pro Met Gly Tyr Gln Gln
 565 570 575
 Gly Thr Gly Pro Thr Ala Gly Val Pro Gly Tyr Gln Met Ala Gly Lys
 580 585 590
 Thr Gly Thr Ala Gln Gln Ile Asn Pro Gly Cys Gly Cys Tyr Phe Asp
 595 600 605
 Asp Val Tyr Trp Ile Thr Phe Ala Gly Ile Ala Thr Ala Asp Asn Pro
 610 615 620
 Arg Tyr Val Ile Gly Ile Met Leu Asp Asn Pro Ala Arg Asn Ser Asp
 625 630 635 640
 Gly Ala Pro Gly His Ser Ala Ala Pro Leu Phe His Asn Ile Ala Gly
 645 650 655
 Trp Leu Met Gln Arg Glu Asn Val Pro Leu Ser Pro Asp Pro Gly Pro
 660 665 670
 Pro Leu Val Leu Gln Ala Thr
 675

<210> 231

<211> 396

<212> PRT

<213> Mycobacterium tuberculosis

<400> 231

Val	Gln	Thr	Arg	Ala	Pro	Trp	Ser	Leu	Pro	Glu	Ala	Thr	Leu	Ala	Tyr
1				5					10					15	
Phe	Pro	Asn	Ala	Arg	Phe	Val	Ser	Ser	Asp	Arg	Asp	Leu	Gly	Ala	Gly
			20					25					30		
Ala	Ala	Pro	Gly	Ile	Ala	Ala	Ser	Arg	Ser	Thr	Ala	Cys	Gln	Thr	Trp
		35					40					45			
Gly	Gly	Ile	Thr	Val	Ala	Asp	Pro	Gly	Ser	Gly	Pro	Thr	Gly	Phe	Gly
	50					55					60				
His	Val	Pro	Val	Leu	Ala	Gln	Arg	Cys	Phe	Glu	Leu	Leu	Thr	Pro	Ala
65					70					75					80
Leu	Thr	Arg	Tyr	Tyr	Pro	Asp	Gly	Ser	Gln	Ala	Val	Leu	Leu	Asp	Ala
			85						90					95	
Thr	Ile	Gly	Ala	Gly	Gly	His	Ala	Glu	Arg	Phe	Leu	Glu	Gly	Leu	Pro
			100					105					110		
Gly	Leu	Arg	Leu	Ile	Gly	Leu	Asp	Arg	Asp	Pro	Thr	Ala	Leu	Asp	Val
		115					120					125			
Ala	Arg	Ser	Arg	Leu	Val	Arg	Phe	Ala	Asp	Arg	Leu	Thr	Leu	Val	His
	130					135					140				
Thr	Arg	Tyr	Asp	Cys	Leu	Gly	Ala	Ala	Leu	Ala	Glu	Ser	Gly	Tyr	Ala
145				150					155						160
Ala	Val	Gly	Ser	Val	Asp	Gly	Ile	Leu	Phe	Asp	Leu	Gly	Val	Ser	Ser
			165					170						175	
Met	Gln	Leu	Asp	Arg	Ala	Glu	Arg	Gly	Phe	Ala	Tyr	Ala	Thr	Asp	Ala
		180						185					190		
Pro	Leu	Asp	Met	Arg	Met	Asp	Pro	Thr	Thr	Pro	Leu	Thr	Ala	Ala	Asp
	195						200					205			
Ile	Val	Asn	Thr	Tyr	Asp	Glu	Ala	Ala	Leu	Ala	Asp	Ile	Leu	Arg	Arg
	210				215						220				
Tyr	Gly	Glu	Glu	Arg	Phe	Ala	Arg	Arg	Ile	Ala	Ala	Gly	Ile	Val	Arg
225				230						235					240
Arg	Arg	Ala	Lys	Thr	Pro	Phe	Thr	Ser	Thr	Ala	Glu	Leu	Val	Ala	Leu
			245					250						255	
Leu	Tyr	Gln	Ala	Ile	Pro	Ala	Pro	Ala	Arg	Arg	Val	Gly	Gly	His	Pro
		260				265						270			
Ala	Lys	Arg	Thr	Phe	Gln	Ala	Leu	Arg	Ile	Ala	Val	Asn	Asp	Glu	Leu
	275					280					285				
Glu	Ser	Leu	Arg	Thr	Ala	Val	Pro	Ala	Ala	Leu	Asp	Ala	Leu	Ala	Ile
	290				295						300				
Gly	Gly	Arg	Ile	Ala	Val	Leu	Ala	Tyr	Gln	Ser	Leu	Glu	Asp	Arg	Ile
305				310					315						320
Val	Lys	Arg	Val	Phe	Ala	Glu	Ala	Val	Ala	Ser	Ala	Thr	Pro	Ala	Gly
			325					330						335	
Leu	Pro	Val	Glu	Leu	Pro	Gly	His	Glu	Pro	Arg	Phe	Arg	Ser	Leu	Thr
		340					345						350		
His	Gly	Ala	Glu	Arg	Ala	Ser	Val	Ala	Glu	Ile	Glu	Arg	Asn	Pro	Arg
	355					360						365			
Ser	Thr	Pro	Val	Arg	Leu	Arg	Ala	Leu	Gln	Arg	Val	Glu	His	Arg	Ala
	370				375						380				
Gln	Ser	Gln	Gln	Trp	Ala	Thr	Glu	Lys	Gly	Asp	Ser				
385					390					395					

<210> 232

<211> 143

<212> PRT

<213> Mycobacterium tuberculosis

<400> 232

```

Met Phe Leu Gly Thr Tyr Thr Pro Lys Leu Asp Asp Lys Gly Arg Leu
 1           5           10           15
Thr Leu Pro Ala Lys Phe Arg Asp Ala Leu Ala Gly Gly Leu Met Val
          20           25           30
Thr Lys Ser Gln Asp His Ser Leu Ala Val Tyr Pro Arg Ala Ala Phe
          35           40           45
Glu Gln Leu Ala Arg Arg Ala Ser Lys Ala Pro Arg Ser Asn Pro Glu
          50           55           60
Ala Arg Ala Phe Leu Arg Asn Leu Ala Ala Gly Thr Asp Glu Gln His
65           70           75           80
Pro Asp Ser Gln Gly Arg Ile Thr Leu Ser Ala Asp His Arg Arg Tyr
          85           90           95
Ala Ser Leu Ser Lys Asp Cys Val Val Ile Gly Ala Val Asp Tyr Leu
          100          105          110
Glu Ile Trp Asp Ala Gln Ala Trp Gln Asn Tyr Gln Gln Ile His Glu
          115          120          125
Glu Asn Phe Ser Ala Ala Ser Asp Glu Ala Leu Gly Asp Ile Phe
          130          135          140

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<210> 233

<211> 214

<212> PRT

<213> Mycobacterium tuberculosis

<400> 233

```

Met Val Ser Arg Tyr Ser Ala Tyr Arg Arg Gly Pro Asp Val Ile Ser
 1           5           10           15
Pro Asp Val Ile Asp Arg Ile Leu Val Gly Ala Cys Ala Ala Val Trp
          20           25           30
Leu Val Phe Thr Gly Val Ser Val Ala Ala Ala Val Ala Leu Met Asp
          35           40           45
Leu Gly Arg Gly Phe His Glu Met Ala Gly Asn Pro His Thr Thr Trp
          50           55           60
Val Leu Tyr Ala Val Ile Val Val Ser Ala Leu Val Ile Val Gly Ala
65           70           75           80
Ile Pro Val Leu Leu Arg Ala Arg Arg Met Ala Glu Ala Glu Pro Ala
          85           90           95
Thr Arg Pro Thr Gly Ala Ser Val Arg Gly Gly Arg Ser Ile Gly Ser
          100          105          110
Gly His Pro Ala Lys Arg Ala Val Ala Glu Ser Ala Pro Val Gln His
          115          120          125
Ala Asp Ala Phe Glu Val Ala Ala Glu Trp Ser Ser Glu Ala Val Asp
          130          135          140
Arg Ile Trp Leu Arg Gly Thr Val Val Leu Thr Ser Ala Ile Gly Ile
145          150          155          160
Ala Leu Ile Ala Val Ala Ala Ala Thr Tyr Leu Met Ala Val Gly His
          165          170          175
Asp Gly Pro Ser Trp Ile Ser Tyr Gly Leu Ala Gly Val Val Thr Ala
          180          185          190
Gly Met Pro Val Ile Glu Trp Leu Tyr Ala Arg Gln Leu Arg Arg Val
          195          200          205
Val Ala Pro Gln Ser Ser
          210

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<210> 234

<211> 299

<212> PRT

<213> Mycobacterium tuberculosis

<400> 234

```

Met Ser Gly Pro Asn Pro Pro Gly Arg Glu Pro Asp Glu Pro Glu Ser
 1           5           10           15
Glu Pro Val Ser Asp Thr Gly Asp Glu Arg Ala Ser Gly Asn His Leu
          20           25           30
Pro Pro Val Ala Gly Gly Gly Asp Lys Leu Pro Ser Asp Gln Thr Gly
          35           40           45
Glu Thr Asp Ala Tyr Ser Arg Ala Tyr Ser Ala Pro Glu Ser Glu His
          50           55           60
Val Thr Gly Gly Pro Tyr Val Pro Ala Asp Leu Arg Leu Tyr Asp Tyr
          65           70           75           80
Asp Asp Tyr Glu Glu Ser Ser Asp Leu Asp Asp Glu Leu Ala Ala Pro
          85           90           95
Arg Trp Pro Trp Val Val Gly Val Ala Ala Ile Ile Ala Ala Val Ala
          100          105          110
Leu Val Val Ser Val Ser Leu Leu Val Thr Arg Pro His Thr Ser Lys
          115          120          125
Leu Ala Thr Gly Asp Thr Thr Ser Ser Ala Pro Pro Val Gln Asp Glu
          130          135          140
Ile Thr Thr Thr Lys Pro Ala Pro Pro Pro Pro Pro Pro Ala Pro Pro
          145          150          155          160
Pro Thr Thr Glu Ile Pro Thr Ala Thr Glu Thr Gln Thr Val Thr Val
          165          170          175
Thr Pro Pro Pro Pro Pro Pro Pro Ala Thr Thr Thr Ala Pro Pro Pro
          180          185          190
Ala Thr Thr Thr Thr Ala Ala Ala Pro Pro Pro Thr Thr Thr Thr Pro
          195          200          205
Thr Gly Pro Arg Gln Val Thr Tyr Ser Val Thr Gly Thr Lys Ala Pro
          210          215          220
Gly Asp Ile Ile Ser Val Thr Tyr Val Asp Ala Ala Gly Arg Arg Arg
          225          230          235          240
Thr Gln His Asn Val Tyr Ile Pro Trp Ser Met Thr Val Thr Pro Ile
          245          250          255
Ser Gln Ser Asp Val Gly Ser Val Glu Ala Ser Ser Leu Phe Arg Val
          260          265          270
Ser Lys Leu Asn Cys Ser Ile Thr Thr Ser Asp Gly Thr Val Leu Ser
          275          280          285
Ser Asn Ser Asn Asp Gly Pro Gln Thr Ser Cys
          290          295

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<210> 235

<211> 139

<212> PRT

<213> Mycobacterium tuberculosis

<400> 235

```

Met His Ile Glu Ala Arg Leu Phe Glu Phe Val Ala Ala Phe Phe Val
 1           5           10           15
Val Thr Ala Val Leu Tyr Gly Val Leu Thr Ser Met Phe Ala Thr Gly
          20           25           30
Gly Val Glu Trp Ala Gly Thr Thr Ala Leu Ala Leu Thr Gly Gly Met
          35           40           45
Ala Leu Ile Val Ala Thr Phe Phe Arg Phe Val Ala Arg Arg Leu Asp

```

50		55		60
Ser Arg Pro Glu Asp Tyr	Glu Gly Ala Glu Ile Ser Asp Gly Ala Gly			
65	70	75	80	
Glu Leu Gly Phe Phe Ser Pro His Ser Trp Trp Pro Ile Met Val Ala				
	85	90	95	
Leu Ser Gly Ser Val Ala Ala Val Gly Ile Ala Leu Trp Leu Pro Trp				
	100	105	110	
Leu Ile Ala Ala Gly Val Ala Phe Ile Leu Ala Ser Ala Ala Gly Leu				
	115	120	125	
Val Phe Glu Tyr Tyr Val Gly Pro Glu Lys His				
130	135			

<210> 236

<211> 363

<212> PRT

<213> Mycobacterium tuberculosis

<400> 236

Val Thr Pro Arg Gly Pro Gly Arg Leu Gln Arg Leu Ser Gln Cys Arg				
1	5	10	15	
Pro Gln Arg Gly Ser Gly Gly Pro Ala Arg Gly Leu Arg Gln Leu Ala				
	20	25	30	
Leu Ala Ala Met Leu Gly Ala Leu Ala Val Thr Val Ser Gly Cys Ser				
	35	40	45	
Trp Ser Glu Ala Leu Gly Ile Gly Trp Pro Glu Gly Ile Thr Pro Glu				
	50	55	60	
Ala His Leu Asn Arg Glu Leu Trp Ile Gly Ala Val Ile Ala Ser Leu				
65	70	75	80	
Ala Val Gly Val Ile Val Trp Gly Leu Ile Phe Trp Ser Ala Val Phe				
	85	90	95	
His Arg Lys Lys Asn Thr Asp Thr Glu Leu Pro Arg Gln Phe Gly Tyr				
	100	105	110	
Asn Met Pro Leu Glu Leu Val Leu Thr Val Ile Pro Phe Leu Ile Ile				
	115	120	125	
Ser Val Leu Phe Tyr Phe Thr Val Val Val Gln Glu Lys Met Leu Gln				
	130	135	140	
Ile Ala Lys Asp Pro Glu Val Val Ile Asp Ile Thr Ser Phe Gln Trp				
145	150	155	160	
Asn Trp Lys Phe Gly Tyr Gln Arg Val Asn Phe Lys Asp Gly Thr Leu				
	165	170	175	
Thr Tyr Asp Gly Ala Asp Pro Glu Arg Lys Arg Ala Met Val Ser Lys				
	180	185	190	
Pro Glu Gly Lys Asp Lys Tyr Gly Glu Glu Leu Val Gly Pro Val Arg				
	195	200	205	
Gly Leu Asn Thr Glu Asp Arg Thr Tyr Leu Asn Phe Asp Lys Val Glu				
	210	215	220	
Thr Leu Gly Thr Ser Thr Glu Ile Pro Val Leu Val Leu Pro Ser Gly				
225	230	235	240	
Lys Arg Ile Glu Phe Gln Met Ala Ser Ala Asp Val Ile His Ala Phe				
	245	250	255	
Trp Val Pro Glu Phe Leu Phe Lys Arg Asp Val Met Pro Asn Pro Val				
	260	265	270	
Ala Asn Asn Ser Val Asn Val Phe Gln Ile Glu Glu Ile Thr Lys Thr				
	275	280	285	
Gly Ala Phe Val Gly His Cys Ala Glu Met Cys Gly Thr Tyr His Ser				
	290	295	300	
Met Met Asn Phe Glu Val Arg Val Val Thr Pro Asn Asp Phe Lys Ala				

305 310 315 320
 Tyr Leu Gln Gln Arg Ile Asp Gly Lys Thr Asn Ala Glu Ala Leu Arg
 325 330 335
 Ala Ile Asn Gln Pro Pro Leu Ala Val Thr Thr His Pro Phe Asp Thr
 340 345 350
 Arg Arg Gly Glu Leu Ala Pro Gln Pro Val Gly
 355 360

<210> 237

<211> 415

<212> PRT

<213> Mycobacterium tuberculosis

<400> 237

Met Thr Val Pro Ala Pro Ser Gln Leu Asp Leu Arg Gln Glu Val His
 1 5 10 15
 Asp Ala Ala Arg Arg Ala Arg Val Ala Ala Arg Arg Leu Ala Ser Leu
 20 25 30
 Pro Thr Thr Val Lys Asp Arg Ala Leu His Ala Ala Ala Asp Glu Leu
 35 40 45
 Leu Ala His Arg Asp Gln Ile Leu Ala Ala Asn Ala Glu Asp Leu Asn
 50 55 60
 Ala Ala Arg Glu Ala Asp Thr Pro Ala Ala Met Leu Asp Arg Leu Ser
 65 70 75 80
 Leu Asn Pro Gln Arg Val Asp Gly Ile Ala Ala Gly Leu Arg Gln Val
 85 90 95
 Ala Gly Leu Arg Asp Pro Val Gly Glu Val Leu Arg Gly Tyr Thr Leu
 100 105 110
 Pro Asn Gly Leu Gln Leu Arg Gln Gln Arg Val Pro Leu Gly Val Val
 115 120 125
 Gly Met Ile Tyr Glu Gly Arg Pro Asn Val Thr Val Asp Ala Phe Gly
 130 135 140
 Leu Thr Leu Lys Ser Gly Asn Ala Ala Leu Leu Arg Gly Ser Ser Ser
 145 150 155 160
 Ala Ala Lys Ser Asn Glu Ala Leu Val Ala Val Leu Arg Thr Ala Leu
 165 170 175
 Val Gly Leu Glu Leu Pro Ala Asp Ala Val Gln Leu Leu Ser Ala Ala
 180 185 190
 Asp Arg Ala Thr Val Thr His Leu Ile Gln Ala Arg Gly Leu Val Asp
 195 200 205
 Val Val Ile Pro Arg Gly Gly Ala Gly Leu Ile Glu Ala Val Val Arg
 210 215 220
 Asp Ala Gln Val Pro Thr Ile Glu Thr Gly Val Gly Asn Cys His Val
 225 230 235 240
 Tyr Val His Gln Ala Ala Asp Leu Asp Val Ala Glu Arg Ile Leu Leu
 245 250 255
 Asn Ser Lys Thr Arg Arg Pro Ser Val Cys Asn Ala Ala Glu Thr Leu
 260 265 270
 Leu Val Asp Ala Ala Ile Ala Glu Thr Ala Leu Pro Arg Leu Leu Ala
 275 280 285
 Ala Leu Gln His Ala Gly Val Thr Val His Leu Asp Pro Asp Glu Ala
 290 295 300
 Asp Leu Arg Arg Glu Tyr Leu Ser Leu Asp Ile Ala Val Ala Val Val
 305 310 315 320
 Asp Gly Val Asp Ala Ala Ile Ala His Ile Asn Glu Tyr Gly Thr Gly
 325 330 335
 His Thr Glu Ala Ile Val Thr Thr Asn Leu Asp Ala Ala Gln Arg Phe

<213> Mycobacterium tuberculosis

Met	Gly	Leu	Leu	Gly	Gln	Ser	Gly	Pro	Arg	Val	Gly	Ser	Gly	Pro	
1				5				10					15		
Val	Gly	Ser	Ile	Pro	Thr	Pro	Val	Asn	Ala	Ala	Ile	Cys	Gln	Gln	Arg
			20					25					30		
Gly	Gly	Phe	His	Gly	Val	Glu	Arg	Gly	Tyr	Ser	Ala	Gly	Asp	Ser	Gly
		35					40					45			
Val	Leu	Thr	Ser	Leu	Gly	Asp	Asn	Glu	Arg	Thr	Met	Asn	Phe	Tyr	Ser
	50					55					60				
Ala	Tyr	Gln	His	Gly	Phe	Val	Arg	Val	Ala	Ala	Cys	Thr	His	His	Thr
65					70				75						80
Thr	Ile	Gly	Asp	Pro	Ala	Ala	Asn	Ala	Ala	Ser	Val	Leu	Asp	Met	Ala
			85					90						95	
Arg	Ala	Cys	His	Asp	Asp	Gly	Ala	Ala	Leu	Ala	Val	Phe	Pro	Glu	Leu
			100					105					110		
Thr	Leu	Ser	Gly	Tyr	Ser	Ile	Glu	Asp	Val	Leu	Leu	Gln	Asp	Ser	Leu
		115					120					125			
Leu	Asp	Ala	Val	Glu	Asp	Ala	Leu	Leu	Asp	Leu	Val	Thr	Glu	Ser	Ala
	130					135					140				
Asp	Leu	Leu	Pro	Val	Leu	Val	Val	Gly	Ala	Pro	Leu	Arg	His	Arg	His
145					150					155					160
Arg	Ile	Tyr	Asn	Thr	Ala	Val	Val	Ile	His	Arg	Gly	Ala	Val	Leu	Gly
			165						170					175	
Val	Val	Pro	Lys	Ser	Tyr	Leu	Pro	Thr	Tyr	Arg	Glu	Phe	Tyr	Glu	Arg
			180					185					190		
Arg	Gln	Met	Ala	Pro	Gly	Asp	Gly	Glu	Arg	Gly	Thr	Ile	Arg	Ile	Gly
		195					200					205			
Gly	Ala	Asp	Val	Ala	Phe	Gly	Thr	Asp	Leu	Leu	Phe	Ala	Ala	Ser	Asp
	210					215					220				
Leu	Pro	Gly	Phe	Val	Leu	His	Val	Glu	Ile	Cys	Glu	Asp	Met	Phe	Val
225					230					235					240
Pro	Met	Pro	Pro	Ser	Ala	Glu	Ala	Ala	Leu	Ala	Gly	Ala	Thr	Val	Leu
			245						250					255	
Ala	Asn	Leu	Ser	Gly	Ser	Pro	Ile	Thr	Ile	Gly	Arg	Ala	Glu	Asp	Arg
			260					265					270		
Arg	Leu	Leu	Ala	Arg	Ser	Ala	Ser	Ala	Arg	Cys	Leu	Ala	Ala	Tyr	Val
		275					280					285			
Tyr	Ala	Ala	Ala	Gly	Glu	Gly	Glu	Ser	Thr	Thr	Asp	Leu	Ala	Trp	Asp
	290					295					300				
Gly	Gln	Thr	Met	Ile	Trp	Glu	Asn	Gly	Ala	Leu	Leu	Ala	Glu	Ser	Glu
305					310					315					320
Arg	Phe	Pro	Lys	Gly	Val	Arg	Arg	Ser	Val	Ala	Asp	Val	Asp	Thr	Glu

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<210> 239
<211> 376
<212> PRT
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<210> 239

<211> 376

<212> PRT

<213> Mycobacterium tuberculosis

<400> 239

```

Met Arg Ser Pro His Arg Asp Ala Ile Arg Thr Ala Arg Gly Leu Val
 1           5           10           15
Val Lys Val Gly Thr Thr Ala Leu Thr Thr Pro Ser Gly Met Phe Asp
          20           25           30
Ala Gly Arg Leu Ala Gly Leu Ala Glu Ala Val Glu Arg Arg Met Lys
          35           40           45
Ala Gly Ser Asp Val Val Ile Val Ser Ser Gly Ala Ile Ala Ala Gly
          50           55           60
Ile Glu Pro Leu Gly Leu Ser Arg Arg Pro Lys Asp Leu Ala Thr Lys
65           70           75           80
Gln Ala Ala Ala Ser Val Gly Gln Val Ala Leu Val Asn Ser Trp Ser
          85           90           95
Ala Ala Phe Ala Arg Tyr Gly Arg Thr Val Gly Gln Val Leu Leu Thr
          100          105          110
Ala His Asp Ile Ser Met Arg Val Gln His Thr Asn Ala Gln Arg Thr
          115          120          125
Leu Asp Arg Leu Arg Ala Leu His Ala Val Ala Ile Val Asn Glu Asn
          130          135          140
Asp Thr Val Ala Thr Asn Glu Ile Arg Phe Gly Asp Asn Asp Arg Leu
145          150          155          160
Ser Ala Leu Val Ala His Leu Val Gly Ala Asp Ala Leu Val Leu Leu
          165          170          175
Ser Asp Ile Asp Gly Leu Tyr Asp Cys Asp Pro Arg Lys Thr Ala Asp
          180          185          190
Ala Thr Phe Ile Pro Glu Val Ser Gly Pro Ala Asp Leu Asp Gly Val
          195          200          205
Val Ala Gly Arg Ser Ser His Leu Gly Thr Gly Gly Met Ala Ser Lys
          210          215          220
Val Ala Ala Ala Leu Leu Ala Ala Asp Ala Gly Val Pro Val Leu Leu
225          230          235          240
Ala Pro Ala Ala Asp Ala Ala Thr Ala Leu Ala Asp Ala Ser Val Gly
          245          250          255
Thr Val Phe Ala Ala Arg Pro Ala Arg Leu Ser Ala Arg Arg Phe Trp
          260          265          270
Val Arg Tyr Ala Ala Glu Ala Thr Gly Ala Leu Thr Leu Asp Ala Gly
          275          280          285
Ala Val Arg Ala Val Val Arg Gln Arg Arg Ser Leu Leu Ala Ala Gly
          290          295          300
Ile Thr Ala Val Ser Gly Arg Phe Cys Gly Gly Asp Val Val Glu Leu
305          310          315          320
Arg Ala Pro Asp Ala Ala Met Val Ala Arg Gly Val Val Ala Tyr Asp
          325          330          335
Ala Ser Glu Leu Ala Thr Met Val Gly Arg Ser Thr Ser Glu Leu Pro
          340          345          350
Gly Glu Leu Arg Arg Pro Val Val His Ala Asp Asp Leu Val Ala Val
          355          360          365
Ser Ala Lys Gln Ala Lys Gln Val
          370          375

```

<210> 240

<211> 479

<212> PRT

<213> Mycobacterium tuberculosis

<400> 240

Val	Pro	Arg	Phe	Val	Asp	Arg	Val	Val	Ile	His	Thr	Arg	Ala	Gly	Ser
1				5					10					15	
Gly	Gly	Asn	Gly	Cys	Ala	Ser	Val	His	Arg	Glu	Lys	Phe	Lys	Pro	Leu
		20						25					30		
Gly	Gly	Pro	Asp	Gly	Gly	Asn	Gly	Arg	Gly	Gly	Ser	Ile	Val	Phe	
		35					40				45				
Val	Val	Asp	Pro	Gln	Val	His	Thr	Leu	Leu	Asp	Phe	His	Phe	Arg	Pro
		50				55					60				
His	Leu	Thr	Ala	Ala	Ser	Gly	Lys	His	Gly	Met	Gly	Asn	Asn	Arg	Asp
65					70				75						80
Gly	Ala	Ala	Gly	Ala	Asp	Leu	Glu	Val	Lys	Val	Pro	Glu	Gly	Thr	Val
			85						90					95	
Val	Leu	Asp	Glu	Asn	Gly	Arg	Leu	Leu	Ala	Asp	Leu	Val	Gly	Ala	Gly
			100						105				110		
Thr	Arg	Phe	Glu	Ala	Ala	Ala	Gly	Gly	Arg	Gly	Gly	Leu	Gly	Asn	Ala
		115					120					125			
Ala	Leu	Ala	Ser	Arg	Val	Arg	Lys	Ala	Pro	Gly	Phe	Ala	Leu	Leu	Gly
		130				135					140				
Glu	Lys	Gly	Gln	Ser	Arg	Asp	Leu	Thr	Leu	Glu	Leu	Lys	Thr	Val	Ala
145				150					155						160
Asp	Val	Gly	Leu	Val	Gly	Phe	Pro	Ser	Ala	Gly	Lys	Ser	Ser	Leu	Val
			165				170							175	
Ser	Ala	Ile	Ser	Ala	Ala	Lys	Pro	Lys	Ile	Ala	Asp	Tyr	Pro	Phe	Thr
		180					185					190			
Thr	Leu	Val	Pro	Asn	Leu	Gly	Val	Val	Ser	Ala	Gly	Glu	His	Ala	Phe
		195				200						205			
Thr	Val	Ala	Asp	Val	Pro	Gly	Leu	Ile	Pro	Gly	Ala	Ser	Arg	Gly	Arg
		210				215					220				
Gly	Leu	Gly	Leu	Asp	Phe	Leu	Arg	His	Ile	Glu	Arg	Cys	Ala	Val	Leu
225				230					235						240
Val	His	Val	Val	Asp	Cys	Ala	Thr	Ala	Glu	Pro	Gly	Arg	Asp	Pro	Ile
			245				250							255	
Ser	Asp	Ile	Asp	Ala	Leu	Glu	Thr	Glu	Leu	Ala	Cys	Tyr	Thr	Pro	Thr
		260					265					270			
Leu	Gln	Gly	Asp	Ala	Ala	Leu	Gly	Asp	Leu	Ala	Ala	Arg	Pro	Arg	Ala
		275					280					285			
Val	Val	Leu	Asn	Lys	Ile	Asp	Val	Pro	Glu	Ala	Arg	Glu	Leu	Ala	Glu
		290				295					300				
Phe	Val	Arg	Asp	Asp	Ile	Ala	Gln	Arg	Gly	Trp	Pro	Val	Phe	Cys	Val
305				310					315						320
Ser	Thr	Ala	Thr	Arg	Glu	Asn	Leu	Gln	Pro	Leu	Ile	Phe	Gly	Leu	Ser
			325				330							335	
Gln	Met	Ile	Ser	Asp	Tyr	Asn	Ala	Ala	Arg	Pro	Val	Ala	Val	Pro	Arg
		340					345					350			
Arg	Pro	Val	Ile	Arg	Pro	Ile	Pro	Val	Asp	Asp	Ser	Gly	Phe	Thr	Val
		355					360					365			
Glu	Pro	Asp	Gly	His	Gly	Gly	Phe	Val	Val	Ser	Gly	Ala	Arg	Pro	Glu
		370				375					380				
Arg	Trp	Ile	Asp	Gln	Thr	Asn	Phe	Asp	Asn	Asp	Glu	Ala	Val	Gly	Tyr
385				390					395						400
Leu	Ala	Asp	Arg	Leu	Ala	Arg	Leu	Gly	Val	Glu	Glu	Glu	Leu	Leu	Arg
			405				410						415		
Leu	Gly	Ala	Arg	Ser	Gly	Cys	Ala	Val	Thr	Ile	Gly	Glu	Met	Thr	Phe
		420					425					430			
Asp	Trp	Glu	Pro	Gln	Thr	Pro	Ala	Gly	Glu	Pro	Val	Ala	Met	Ser	Gly
		435					440					445			

Arg Gly Thr Asp Pro Arg Leu Asp Ser Asn Lys Arg Val Gly Ala Ala
 450 455 460
 Glu Arg Lys Ala Ala Arg Ser Arg Arg Arg Glu His Gly Asp Gly
 465 470 475

<210> 241
 <211> 86
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 241
 Met Ala His Lys Lys Gly Ala Ser Ser Ser Arg Asn Gly Arg Asp Ser
 1 5 10 15
 Ala Ala Gln Arg Leu Gly Val Lys Arg Tyr Gly Gly Gln Val Val Lys
 20 25 30
 Ala Gly Glu Ile Leu Val Arg Gln Arg Gly Thr Lys Phe His Pro Gly
 35 40 45
 Val Asn Val Gly Arg Gly Gly Asp Asp Thr Leu Phe Ala Lys Thr Ala
 50 55 60
 Gly Ala Val Glu Phe Gly Ile Lys Arg Gly Arg Lys Thr Val Ser Ile
 65 70 75 80
 Val Gly Ser Thr Thr Ala
 85

<210> 242
 <211> 104
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 242
 Met Met Ala Thr Tyr Ala Ile Val Lys Thr Gly Gly Lys Gln Tyr Lys
 1 5 10 15
 Val Ala Val Gly Asp Val Val Lys Val Glu Lys Leu Glu Ser Glu Gln
 20 25 30
 Gly Glu Lys Val Ser Leu Pro Val Ala Leu Val Val Asp Gly Ala Thr
 35 40 45
 Val Thr Thr Asp Ala Lys Ala Leu Ala Lys Val Ala Val Thr Gly Glu
 50 55 60
 Val Leu Gly His Thr Lys Gly Pro Lys Ile Arg Ile His Lys Phe Lys
 65 70 75 80
 Asn Lys Thr Gly Tyr His Lys Arg Gln Gly His Arg Gln Gln Leu Thr
 85 90 95
 Val Leu Lys Val Thr Gly Ile Ala
 100

<210> 243
 <211> 876
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 243
 Met Leu Pro Lys Ser Trp Asp Pro Ala Ala Met Glu Ser Ala Ile Tyr
 1 5 10 15
 Gln Lys Trp Leu Asp Ala Gly Tyr Phe Thr Ala Asp Pro Thr Ser Thr
 20 25 30
 Lys Pro Ala Tyr Ser Ile Val Leu Pro Pro Pro Asn Val Thr Gly Ser
 35 40 45

Leu	His	Met	Gly	His	Ala	Leu	Glu	His	Thr	Met	Met	Asp	Ala	Leu	Thr
50						55					60				
Arg	Arg	Lys	Arg	Met	Gln	Gly	Tyr	Glu	Val	Leu	Trp	Gln	Pro	Gly	Thr
65					70					75					80
Asp	His	Ala	Gly	Ile	Ala	Thr	Gln	Ser	Val	Val	Glu	Gln	Gln	Leu	Ala
				85					90					95	
Val	Asp	Gly	Lys	Thr	Lys	Glu	Asp	Leu	Gly	Arg	Glu	Leu	Phe	Val	Asp
			100					105					110		
Lys	Val	Trp	Asp	Trp	Lys	Arg	Glu	Ser	Gly	Gly	Ala	Ile	Gly	Gly	Gln
		115					120					125			
Met	Arg	Arg	Leu	Gly	Asp	Gly	Val	Asp	Trp	Ser	Arg	Asp	Arg	Phe	Thr
	130					135					140				
Met	Asp	Glu	Gly	Leu	Ser	Arg	Ala	Val	Arg	Thr	Ile	Phe	Lys	Arg	Leu
145					150					155					160
Tyr	Asp	Ala	Gly	Leu	Ile	Tyr	Arg	Ala	Glu	Arg	Leu	Val	Asn	Trp	Ser
				165					170					175	
Pro	Val	Leu	Gln	Thr	Ala	Ile	Ser	Asp	Leu	Glu	Val	Asn	Tyr	Arg	Asp
			180						185				190		
Val	Glu	Gly	Glu	Leu	Val	Ser	Phe	Arg	Tyr	Gly	Ser	Leu	Asp	Asp	Ser
		195					200					205			
Gln	Pro	His	Ile	Val	Val	Ala	Thr	Thr	Arg	Val	Glu	Thr	Met	Leu	Gly
	210					215						220			
Asp	Thr	Ala	Ile	Ala	Val	His	Pro	Asp	Asp	Glu	Arg	Tyr	Arg	His	Leu
225					230					235					240
Val	Gly	Thr	Ser	Leu	Ala	His	Pro	Phe	Val	Asp	Arg	Glu	Leu	Ala	Ile
				245					250					255	
Val	Ala	Asp	Glu	His	Val	Asp	Pro	Glu	Phe	Gly	Thr	Gly	Ala	Val	Lys
			260					265					270		
Val	Thr	Pro	Ala	His	Asp	Pro	Asn	Asp	Phe	Glu	Ile	Gly	Val	Arg	His
		275					280					285			
Gln	Leu	Pro	Met	Pro	Ser	Ile	Leu	Asp	Thr	Lys	Gly	Arg	Ile	Val	Asp
	290					295					300				
Thr	Gly	Thr	Arg	Phe	Asp	Gly	Met	Asp	Arg	Phe	Glu	Ala	Arg	Val	Ala
305					310					315					320
Val	Arg	Gln	Ala	Leu	Ala	Ala	Gln	Gly	Arg	Val	Val	Glu	Glu	Lys	Arg
				325					330					335	
Pro	Tyr	Leu	His	Ser	Val	Gly	His	Ser	Glu	Arg	Ser	Gly	Glu	Pro	Ile
		340						345					350		
Glu	Pro	Arg	Leu	Ser	Leu	Gln	Trp	Trp	Val	Arg	Val	Glu	Ser	Leu	Ala
		355					360					365			
Lys	Ala	Ala	Gly	Asp	Ala	Val	Arg	Asn	Gly	Asp	Thr	Val	Ile	His	Pro
	370					375					380				
Ala	Ser	Met	Glu	Pro	Arg	Trp	Phe	Ser	Trp	Val	Asp	Asp	Met	His	Asp
385					390					395					400
Trp	Cys	Ile	Ser	Arg	Gln	Leu	Trp	Trp	Gly	His	Arg	Ile	Pro	Ile	Trp
				405					410					415	
Tyr	Gly	Pro	Asp	Gly	Glu	Gln	Val	Cys	Val	Gly	Pro	Asp	Glu	Thr	Pro
			420					425					430		
Pro	Gln	Gly	Trp	Glu	Gln	Asp	Pro	Asp	Val	Leu	Asp	Thr	Trp	Phe	Ser
		435					440					445			
Ser	Ala	Leu	Trp	Pro	Phe	Ser	Thr	Leu	Gly	Trp	Pro	Asp	Lys	Thr	Ala
	450					455					460				
Glu	Leu	Glu	Lys	Phe	Tyr	Pro	Thr	Ser	Val	Leu	Val	Thr	Gly	Tyr	Asp
465					470					475					480
Ile	Leu	Phe	Phe	Trp	Val	Ala	Arg	Met	Met	Met	Phe	Gly	Thr	Phe	Val
				485					490					495	
Gly	Asp	Asp	Ala	Ala	Ile	Thr	Leu	Asp	Gly	Arg	Arg	Gly	Pro	Gln	Val

500					505					510					
Pro	Phe	Thr	Asp	Val	Phe	Leu	His	Gly	Leu	Ile	Arg	Asp	Glu	Ser	Gly
515					520					525					
Arg	Lys	Met	Ser	Lys	Ser	Lys	Gly	Asn	Val	Ile	Asp	Pro	Leu	Asp	Trp
530					535					540					
Val	Glu	Met	Phe	Gly	Ala	Asp	Ala	Leu	Arg	Phe	Thr	Leu	Ala	Arg	Gly
545					550					555					
Ala	Ser	Pro	Gly	Gly	Asp	Leu	Ala	Val	Ser	Glu	Asp	Ala	Val	Arg	Ala
565					570					575					
Ser	Arg	Asn	Phe	Gly	Thr	Lys	Leu	Phe	Asn	Ala	Thr	Arg	Tyr	Ala	Leu
580					585					590					
Leu	Asn	Gly	Ala	Ala	Pro	Ala	Pro	Leu	Pro	Ser	Pro	Asn	Glu	Leu	Thr
595					600					605					
Asp	Ala	Asp	Arg	Trp	Ile	Leu	Gly	Arg	Leu	Glu	Glu	Val	Arg	Ala	Glu
610					615					620					
Val	Asp	Ser	Ala	Phe	Asp	Gly	Tyr	Glu	Phe	Ser	Arg	Ala	Cys	Glu	Ser
625					630					635					
Leu	Tyr	His	Phe	Ala	Trp	Asp	Glu	Phe	Cys	Asp	Trp	Tyr	Leu	Glu	Leu
645					650					655					
Ala	Lys	Thr	Gln	Leu	Ala	Gln	Gly	Leu	Thr	His	Thr	Thr	Ala	Val	Leu
660					665					670					
Ala	Ala	Gly	Leu	Asp	Thr	Leu	Leu	Arg	Leu	Leu	His	Pro	Val	Ile	Pro
675					680					685					
Phe	Leu	Thr	Glu	Ala	Leu	Trp	Leu	Ala	Leu	Thr	Gly	Arg	Glu	Ser	Leu
690					695					700					
Val	Ser	Ala	Asp	Trp	Pro	Glu	Pro	Ser	Gly	Ile	Ser	Val	Asp	Leu	Val
705					710					715					
Ala	Ala	Gln	Arg	Ile	Asn	Asp	Met	Gln	Lys	Leu	Val	Thr	Glu	Val	Arg
725					730					735					
Arg	Phe	Arg	Ser	Asp	Gln	Gly	Leu	Ala	Asp	Arg	Gln	Lys	Val	Pro	Ala
740					745					750					
Arg	Met	His	Gly	Val	Arg	Asp	Ser	Asp	Leu	Ser	Asn	Gln	Val	Ala	Ala
755					760					765					
Val	Thr	Ser	Leu	Ala	Trp	Leu	Thr	Glu	Pro	Gly	Pro	Asp	Phe	Glu	Pro
770					775					780					
Ser	Val	Ser	Leu	Glu	Val	Arg	Leu	Gly	Pro	Glu	Met	Asn	Arg	Thr	Val
785					790					795					
Val	Val	Glu	Leu	Asp	Thr	Ser	Gly	Thr	Ile	Asp	Val	Ala	Ala	Glu	Arg
805					810					815					
Arg	Arg	Leu	Glu	Lys	Glu	Leu	Ala	Gly	Ala	Gln	Lys	Glu	Leu	Ala	Ser
820					825					830					
Thr	Ala	Ala	Lys	Leu	Ala	Asn	Ala	Asp	Phe	Leu	Ala	Lys	Ala	Pro	Asp
835					840					845					
Ala	Val	Ile	Ala	Lys	Ile	Arg	Asp	Arg	Gln	Arg	Val	Ala	Gln	Gln	Glu
850					855					860					
Thr	Glu	Arg	Ile	Thr	Thr	Arg	Leu	Ala	Ala	Leu	Gln				
865					870					875					

<210> 244

<211> 789

<212> PRT

<213> Mycobacterium tuberculosis

<400> 244

Val	Thr	Lys	Pro	Ala	Ala	Asp	Ala	Ser	Ala	Val	Leu	Thr	Ala	Glu	Asp
1				5					10					15	
Thr	Leu	Val	Leu	Ala	Ser	Thr	Ala	Thr	Pro	Val	Glu	Met	Glu	Leu	Ile

			20					25					30			
Met	Gly	Trp	Leu	Gly	Gln	Gln	Arg	Ala	Arg	His	Pro	Asp	Ser	Lys	Phe	
		35					40					45				
Asp	Ile	Leu	Lys	Leu	Pro	Pro	Arg	Asn	Ala	Pro	Pro	Ala	Ala	Leu	Thr	
	50					55					60					
Ala	Leu	Val	Glu	Gln	Leu	Glu	Pro	Gly	Phe	Ala	Ser	Ser	Pro	Gln	Ser	
65					70					75					80	
Gly	Glu	Asp	Arg	Ser	Ile	Val	Pro	Val	Arg	Val	Ile	Trp	Leu	Pro	Pro	
				85					90					95		
Ala	Asp	Arg	Ser	Arg	Ala	Gly	Lys	Val	Ala	Ala	Leu	Leu	Pro	Gly	Arg	
			100					105					110			
Asp	Pro	Tyr	His	Pro	Ser	Gln	Arg	Gln	Gln	Arg	Arg	Ile	Leu	Arg	Thr	
		115					120					125				
Asp	Pro	Arg	Arg	Ala	Arg	Val	Val	Ala	Gly	Glu	Ser	Ala	Lys	Val	Ser	
	130					135					140					
Glu	Leu	Arg	Gln	Gln	Trp	Arg	Asp	Thr	Thr	Val	Ala	Glu	His	Lys	Arg	
145					150					155					160	
Asp	Phe	Ala	Gln	Phe	Val	Ser	Arg	Arg	Ala	Leu	Leu	Ala	Leu	Ala	Arg	
				165					170						175	
Ala	Glu	Tyr	Arg	Ile	Leu	Gly	Pro	Gln	Tyr	Lys	Ser	Pro	Arg	Leu	Val	
			180					185					190			
Lys	Pro	Glu	Met	Leu	Ala	Ser	Ala	Arg	Phe	Arg	Ala	Gly	Leu	Asp	Arg	
		195					200					205				
Ile	Pro	Gly	Ala	Thr	Val	Glu	Asp	Ala	Gly	Lys	Met	Leu	Asp	Glu	Leu	
	210					215					220					
Ser	Thr	Gly	Trp	Ser	Gln	Val	Ser	Val	Asp	Leu	Val	Ser	Val	Leu	Gly	
225					230					235					240	
Arg	Leu	Ala	Ser	Arg	Gly	Phe	Asp	Pro	Glu	Phe	Asp	Tyr	Asp	Glu	Tyr	
				245					250					255		
Gln	Val	Ala	Ala	Met	Arg	Ala	Ala	Leu	Glu	Ala	His	Pro	Ala	Val	Leu	
			260					265					270			
Leu	Phe	Ser	His	Arg	Ser	Tyr	Ile	Asp	Gly	Val	Val	Val	Pro	Val	Ala	
		275					280					285				
Met	Gln	Asp	Asn	Arg	Leu	Pro	Pro	Val	His	Met	Phe	Gly	Gly	Ile	Asn	
	290					295					300					
Leu	Ser	Phe	Gly	Leu	Met	Gly	Pro	Leu	Met	Arg	Arg	Ser	Gly	Met	Ile	
305					310					315					320	
Phe	Ile	Arg	Arg	Asn	Ile	Gly	Asn	Asp	Pro	Leu	Tyr	Lys	Tyr	Val	Leu	
				325					330					335		
Lys	Glu	Tyr	Val	Gly	Tyr	Val	Val	Glu	Lys	Arg	Phe	Asn	Leu	Ser	Trp	
			340					345					350			
Ser	Ile	Glu	Gly	Thr	Arg	Ser	Arg	Thr	Gly	Lys	Met	Leu	Pro	Pro	Lys	
		355					360					365				
Leu	Gly	Leu	Met	Ser	Tyr	Val	Ala	Asp	Ala	Tyr	Leu	Asp	Gly	Arg	Ser	
	370					375										

Leu Gln Ala Thr Pro Val Thr Ala Thr Gly Leu Val Ser Ala Leu Leu
 485 490 495
 Leu Thr Thr Arg Gly Thr Ala Leu Thr Leu Asp Gln Leu His His Thr
 500 505 510
 Leu Gln Asp Ser Leu Asp Tyr Leu Glu Arg Lys Gln Ser Pro Val Ser
 515 520 525
 Thr Ser Ala Leu Arg Leu Arg Ser Arg Glu Gly Val Arg Ala Ala Ala
 530 535 540
 Asp Ala Leu Ser Asn Gly His Pro Val Thr Arg Val Asp Ser Gly Arg
 545 550 555 560
 Glu Pro Val Trp Tyr Ile Ala Pro Asp Asp Glu His Ala Ala Ala Phe
 565 570 575
 Tyr Arg Asn Ser Val Ile His Ala Phe Leu Glu Thr Ser Ile Val Glu
 580 585 590
 Leu Ala Leu Ala His Ala Lys His Ala Glu Gly Asp Arg Val Ala Ala
 595 600 605
 Phe Trp Ala Gln Ala Met Arg Leu Arg Asp Leu Leu Lys Phe Asp Phe
 610 615 620
 Tyr Phe Ala Asp Ser Thr Ala Phe Arg Ala Asn Ile Ala Gln Glu Met
 625 630 635 640
 Ala Trp His Gln Asp Trp Glu Asp His Leu Gly Val Gly Gly Asn Glu
 645 650 655
 Ile Asp Ala Met Leu Tyr Ala Lys Arg Pro Leu Met Ser Asp Ala Met
 660 665 670
 Leu Arg Val Phe Phe Glu Ala Tyr Glu Ile Val Ala Asp Val Leu Arg
 675 680 685
 Asp Ala Pro Pro Asp Ile Gly Pro Glu Glu Leu Thr Glu Leu Ala Leu
 690 695 700
 Gly Leu Gly Arg Gln Phe Val Ala Gln Gly Arg Val Arg Ser Ser Glu
 705 710 715 720
 Pro Val Ser Thr Leu Leu Phe Ala Thr Ala Arg Gln Val Ala Val Asp
 725 730 735
 Gln Glu Leu Ile Ala Pro Ala Ala Asp Leu Ala Glu Arg Arg Val Ala
 740 745 750
 Phe Arg Arg Glu Leu Arg Asn Ile Leu Arg Asp Phe Asp Tyr Val Glu
 755 760 765
 Gln Ile Ala Arg Asn Gln Phe Val Ala Cys Glu Phe Lys Ala Arg Gln
 770 775 780
 Gly Arg Asp Arg Ile
 785

<210> 245

<211> 268

<212> PRT

<213> Mycobacterium tuberculosis

<400> 245

Met Pro Ile Pro Ala Pro Ser Pro Asp Ala Arg Ala Val Val Thr Gly
 1 5 10 15
 Ala Ser Gln Asn Ile Gly Ala Ala Leu Ala Thr Glu Leu Ala Ala Arg
 20 25 30
 Gly His His Leu Ile Val Thr Ala Arg Arg Glu Asp Val Leu Thr Glu
 35 40 45
 Leu Ala Ala Arg Leu Ala Asp Lys Tyr Arg Val Thr Val Asp Val Arg
 50 55 60
 Pro Ala Asp Leu Ala Asp Pro Gln Glu Arg Ser Lys Leu Ala Asp Glu
 65 70 75 80

Leu Ala Ala Arg Pro Ile Ser Ile Leu Cys Ala Asn Ala Gly Thr Ala
 85 90 95
 Thr Phe Gly Pro Ile Ala Ser Leu Asp Leu Ala Gly Glu Lys Thr Gln
 100 105 110
 Val Gln Leu Asn Ala Val Ala Val His Asp Leu Thr Leu Ala Val Leu
 115 120 125
 Pro Gly Met Ile Glu Arg Lys Ala Gly Gly Ile Leu Ile Ser Gly Ser
 130 135 140
 Ala Ala Gly Asn Ser Pro Ile Pro Tyr Asn Ala Thr Tyr Ala Ala Thr
 145 150 155 160
 Lys Ala Phe Val Asn Thr Phe Ser Glu Ser Leu Arg Gly Glu Leu Arg
 165 170 175
 Gly Ser Gly Val His Val Thr Val Leu Ala Pro Gly Pro Val Arg Thr
 180 185 190
 Glu Leu Pro Asp Ala Ser Glu Ala Ser Leu Val Glu Lys Leu Val Pro
 195 200 205
 Asp Phe Leu Trp Ile Ser Thr Glu His Thr Ala Arg Val Ser Leu Asn
 210 215 220
 Ala Leu Glu Arg Asn Lys Met Arg Val Val Pro Gly Leu Thr Ser Lys
 225 230 235 240
 Ala Met Ser Val Ala Ser Gln Tyr Ala Pro Arg Ala Ile Val Ala Pro
 245 250 255
 Ile Val Gly Ala Phe Tyr Lys Arg Leu Gly Gly Ser
 260 265

<210> 246

<211> 3069

<212> PRT

<213> Mycobacterium tuberculosis

<400> 246

Val Thr Ile His Glu His Asp Arg Val Ser Ala Asp Arg Gly Gly Asp
 1 5 10 15
 Ser Pro His Thr Thr His Ala Leu Val Asp Arg Leu Met Ala Gly Glu
 20 25 30
 Pro Tyr Ala Val Ala Phe Gly Gly Gln Gly Ser Ala Trp Leu Glu Thr
 35 40 45
 Leu Glu Glu Leu Val Ser Ala Thr Gly Ile Glu Thr Glu Leu Ala Thr
 50 55 60
 Leu Val Gly Glu Ala Glu Leu Leu Leu Asp Pro Val Thr Asp Glu Leu
 65 70 75 80
 Ile Val Val Arg Pro Ile Gly Phe Glu Pro Leu Gln Trp Val Arg Ala
 85 90 95
 Leu Ala Ala Glu Asp Pro Val Pro Ser Asp Lys His Leu Thr Ser Ala
 100 105 110
 Ala Val Ser Val Pro Gly Val Leu Leu Thr Gln Ile Ala Ala Thr Arg
 115 120 125
 Ala Leu Ala Arg Gln Gly Met Asp Leu Val Ala Thr Pro Pro Val Ala
 130 135 140
 Met Ala Gly His Ser Gln Gly Val Leu Ala Val Glu Ala Leu Lys Ala
 145 150 155 160
 Gly Gly Ala Arg Asp Val Glu Leu Phe Ala Leu Ala Gln Leu Ile Gly
 165 170 175
 Ala Ala Gly Thr Leu Val Ala Arg Arg Arg Gly Ile Ser Val Leu Gly
 180 185 190
 Asp Arg Pro Pro Met Val Ser Val Thr Asn Ala Asp Pro Glu Arg Ile
 195 200 205

Gly	Arg	Leu	Leu	Asp	Glu	Phe	Ala	Gln	Asp	Val	Arg	Thr	Val	Leu	Pro
210						215				220					
Pro	Val	Leu	Ser	Ile	Arg	Asn	Gly	Arg	Arg	Ala	Val	Val	Ile	Thr	Gly
225					230					235					240
Thr	Pro	Glu	Gln	Leu	Ser	Arg	Phe	Glu	Leu	Tyr	Cys	Arg	Gln	Ile	Ser
				245					250					255	
Glu	Lys	Glu	Glu	Ala	Asp	Arg	Lys	Asn	Lys	Val	Arg	Gly	Gly	Asp	Val
			260					265					270		
Phe	Ser	Pro	Val	Phe	Glu	Pro	Val	Gln	Val	Glu	Val	Gly	Phe	His	Thr
		275					280					285			
Pro	Arg	Leu	Ser	Asp	Gly	Ile	Asp	Ile	Val	Ala	Gly	Trp	Ala	Glu	Lys
		290				295					300				
Ala	Gly	Leu	Asp	Val	Ala	Leu	Ala	Arg	Glu	Leu	Ala	Asp	Ala	Ile	Leu
305					310					315					320
Ile	Arg	Lys	Val	Asp	Trp	Val	Asp	Glu	Ile	Thr	Arg	Val	His	Ala	Ala
				325					330					335	
Gly	Ala	Arg	Trp	Ile	Leu	Asp	Leu	Gly	Pro	Gly	Asp	Ile	Leu	Thr	Arg
			340					345					350		
Leu	Thr	Ala	Pro	Val	Ile	Arg	Gly	Leu	Gly	Ile	Gly	Ile	Val	Pro	Ala
		355					360					365			
Ala	Thr	Arg	Gly	Gly	Gln	Arg	Asn	Leu	Phe	Thr	Val	Gly	Ala	Thr	Pro
		370				375					380				
Glu	Val	Ala	Arg	Ala	Trp	Ser	Ser	Tyr	Ala	Pro	Thr	Val	Val	Arg	Leu
385					390					395					400
Pro	Asp	Gly	Arg	Val	Lys	Leu	Ser	Thr	Lys	Phe	Thr	Arg	Leu	Thr	Gly
				405					410					415	
Arg	Ser	Pro	Ile	Leu	Leu	Ala	Gly	Met	Thr	Pro	Thr	Thr	Val	Asp	Ala
			420					425					430		
Lys	Ile	Val	Ala	Ala	Ala	Ala	Asn	Ala	Gly	His	Trp	Ala	Glu	Leu	Ala
		435					440					445			
Gly	Gly	Gly	Gln	Val	Thr	Glu	Glu	Ile	Phe	Gly	Asn	Arg	Ile	Glu	Gln
		450				455				460					
Met	Ala	Gly	Leu	Leu	Glu	Pro	Gly	Arg	Thr	Tyr	Gln	Phe	Asn	Ala	Leu
465					470					475					480
Phe	Leu	Asp	Pro	Tyr	Leu	Trp	Lys	Leu	Gln	Val	Gly	Gly	Lys	Arg	Leu
				485					490					495	
Val	Gln	Lys	Ala	Arg	Gln	Ser	Gly	Ala	Ala	Ile	Asp	Gly	Val	Val	Ile
			500					505					510		
Ser	Ala	Gly	Ile	Pro	Asp	Leu	Asp	Glu	Ala	Val	Glu	Leu	Ile	Asp	Glu
		515					520					525			
Leu	Gly	Asp	Ile	Gly	Ile	Ser	His	Val	Val	Phe	Lys	Pro	Gly	Thr	Ile
		530				535					540				
Glu	Gln	Ile	Arg	Ser	Val	Ile	Arg	Ile	Ala	Thr	Glu	Val	Pro	Thr	Lys
545					550					555					560
Pro	Val	Ile	Met	His	Val	Glu	Gly	Gly	Arg	Ala	Gly	Gly	His	His	Ser
				565					570					575	
Trp	Glu	Asp	Leu	Asp	Asp	Leu	Leu	Leu	Ala	Thr	Tyr	Ser	Glu	Leu	Arg
			580					585					590		
Ser	Arg	Ala	Asn	Ile	Thr	Val	Cys	Val	Gly	Gly	Gly	Ile	Gly	Thr	Pro
		595					600					605			
Arg	Arg	Ala	Ala	Glu	Tyr	Leu	Ser	Gly	Arg	Trp	Ala	Gln	Ala	Tyr	Gly
		610				615					620				
Phe	Pro	Leu	Met	Pro	Ile	Asp	Gly	Ile	Leu	Val	Gly	Thr	Ala	Ala	Met
625					630					635					640
Ala	Thr	Lys	Glu	Ser	Thr	Thr	Ser	Pro	Ser	Val	Lys	Arg	Met	Leu	Val
				645					650					655	
Asp	Thr	Gln	Gly	Thr	Asp	Gln	Trp	Ile	Ser	Ala	Gly	Lys	Ala	Gln	Gly

			660								665								670				
Gly	Met	Ala	Ser	Ser	Arg	Ser	Gln	Leu	Gly	Ala	Asp	Ile	His	Glu	Ile								
		675					680					685											
Asp	Asn	Ser	Ala	Ser	Arg	Cys	Gly	Arg	Leu	Leu	Asp	Glu	Val	Ala	Gly								
		690				695					700												
Asp	Ala	Glu	Ala	Val	Ala	Glu	Arg	Arg	Asp	Glu	Ile	Ile	Ala	Ala	Met								
705					710					715					720								
Ala	Lys	Thr	Ala	Lys	Pro	Tyr	Phe	Gly	Asp	Val	Ala	Asp	Met	Thr	Tyr								
				725					730						735								
Leu	Gln	Trp	Leu	Arg	Arg	Tyr	Val	Glu	Leu	Ala	Ile	Gly	Glu	Gly	Asn								
			740					745					750										
Ser	Thr	Ala	Asp	Thr	Ala	Ser	Val	Gly	Ser	Pro	Trp	Leu	Ala	Asp	Thr								
		755					760					765											
Trp	Arg	Asp	Arg	Phe	Glu	Gln	Met	Leu	Gln	Arg	Ala	Glu	Ala	Arg	Leu								
		770				775					780												
His	Pro	Gln	Asp	Phe	Gly	Pro	Ile	Gln	Thr	Leu	Phe	Thr	Asp	Ala	Gly								
785					790					795					800								
Leu	Leu	Asp	Asn	Pro	Gln	Gln	Ala	Ile	Ala	Ala	Leu	Leu	Ala	Arg	Tyr								
			805						810						815								
Pro	Asp	Ala	Glu	Thr	Val	Gln	Leu	His	Pro	Ala	Asp	Val	Pro	Phe	Phe								
			820					825					830										
Val	Thr	Leu	Cys	Lys	Thr	Leu	Gly	Lys	Pro	Val	Asn	Phe	Val	Pro	Val								
			835				840					845											
Ile	Asp	Gln	Asp	Val	Arg	Arg	Trp	Trp	Arg	Ser	Asp	Ser	Leu	Trp	Gln								
						855					860												
Ala	His	Asp	Ala	Arg	Tyr	Asp	Ala	Asp	Ala	Val	Cys	Ile	Ile	Pro	Gly								
865					870					875					880								
Thr	Ala	Ser	Val	Ala	Gly	Ile	Thr	Arg	Met	Asp	Glu	Pro	Val	Gly	Glu								
				885					890						895								
Leu	Leu	Asp	Arg	Phe	Glu	Gln	Ala	Ala	Ile	Asp	Glu	Val	Leu	Gly	Ala								
			900					905					910										
Gly	Val	Glu	Pro	Lys	Asp	Val	Ala	Ser	Arg	Arg	Leu	Gly	Arg	Ala	Asp								
			915				920					925											
Val	Ala	Gly	Pro	Leu	Ala	Val	Val	Leu	Asp	Ala	Pro	Asp	Val	Arg	Trp								
						935					940												
Ala	Gly	Arg	Thr	Val	Thr	Asn	Pro	Val	His	Arg	Ile	Ala	Asp	Pro	Ala								
945					950																		

Asp His Ala Ala Arg Val Val Gly Gln Leu Pro Thr Val Pro Ala Gln
 1125 1130 1135
 Leu Thr Val Thr Ala Thr Ala Ala Asn Ala Thr Asp Thr Asp Met Gly
 1140 1145 1150
 Arg Val Val Pro Val Ser Val Val Val Thr Gly Ala Asp Gly Ala Val
 1155 1160 1165
 Ile Ala Thr Leu Glu Glu Arg Phe Ala Ile Leu Gly Arg Thr Gly Ser
 1170 1175 1180
 Ala Glu Leu Ala Asp Pro Ala Arg Ala Gly Gly Ala Val Ser Ala Asn
 1185 1190 1195 1200
 Ala Thr Asp Thr Pro Arg Arg Arg Arg Arg Asp Val Thr Ile Thr Ala
 1205 1210 1215
 Pro Val Asp Met Arg Pro Phe Ala Val Val Ser Gly Asp His Asn Pro
 1220 1225 1230
 Ile His Thr Asp Arg Ala Ala Ala Leu Leu Ala Gly Leu Glu Ser Pro
 1235 1240 1245
 Ile Val His Gly Met Trp Leu Ser Ala Ala Ala Gln His Ala Val Thr
 1250 1255 1260
 Ala Thr Asp Gly Gln Ala Arg Pro Pro Ala Arg Leu Val Gly Trp Thr
 1265 1270 1275 1280
 Ala Arg Phe Leu Gly Met Val Arg Pro Gly Asp Glu Val Asp Phe Arg
 1285 1290 1295
 Val Glu Arg Val Gly Ile Asp Gln Gly Ala Glu Ile Val Asp Val Ala
 1300 1305 1310
 Ala Arg Val Gly Ser Asp Leu Val Met Ser Ala Ser Ala Arg Leu Ala
 1315 1320 1325
 Ala Pro Lys Thr Val Tyr Ala Phe Pro Gly Gln Gly Ile Gln His Lys
 1330 1335 1340
 Gly Met Gly Met Glu Val Arg Ala Arg Ser Lys Ala Ala Arg Lys Val
 1345 1350 1355 1360
 Trp Asp Thr Ala Asp Lys Phe Thr Arg Asp Thr Leu Gly Phe Ser Val
 1365 1370 1375
 Leu His Val Val Arg Asp Asn Pro Thr Ser Ile Ile Ala Ser Gly Val
 1380 1385 1390
 His Tyr His His Pro Asp Gly Val Leu Tyr Leu Thr Gln Phe Thr Gln
 1395 1400 1405
 Val Ala Met Ala Thr Val Ala Ala Ala Gln Val Ala Glu Met Arg Glu
 1410 1415 1420
 Gln Gly Ala Phe Val Glu Gly Ala Ile Ala Cys Gly His Ser Val Gly
 1425 1430 1435 1440
 Glu Tyr Thr Ala Leu Ala Cys Val Thr Gly Ile Tyr Gln Leu Glu Ala
 1445 1450 1455
 Leu Leu Glu Met Val Phe His Arg Gly Ser Lys Met His Asp Ile Val
 1460 1465 1470
 Pro Arg Asp Glu Leu Gly Arg Ser Asn Tyr Arg Leu Ala Ala Ile Arg
 1475 1480 1485
 Pro Ser Gln Ile Asp Leu Asp Asp Ala Asp Val Pro Ala Phe Val Ala
 1490 1495 1500
 Gly Ile Ala Glu Ser Thr Gly Glu Phe Leu Glu Ile Val Asn Phe Asn
 1505 1510 1515 1520
 Leu Arg Gly Ser Gln Tyr Ala Ile Ala Gly Thr Val Arg Gly Leu Glu
 1525 1530 1535
 Ala Leu Glu Ala Glu Val Glu Arg Arg Arg Glu Leu Thr Gly Gly Arg
 1540 1545 1550
 Arg Ser Phe Ile Leu Val Pro Gly Ile Asp Val Pro Phe His Ser Arg
 1555 1560 1565
 Val Leu Arg Val Gly Val Ala Glu Phe Arg Arg Ser Leu Asp Arg Val

1570	1575	1580
Met Pro Arg Asp Ala Asp	Pro Asp Leu Ile Ile	Gly Arg Tyr Ile Pro
1585	1590	1595
Asn Leu Val Pro Arg Leu	Phe Thr Leu Asp Arg	Asp Phe Ile Gln Glu
1605	1610	1615
Ile Arg Asp Leu Val Pro	Ala Glu Pro Leu Asp	Glu Ile Leu Ala Asp
1620	1625	1630
Tyr Asp Thr Trp Leu Arg	Glu Arg Pro Arg Glu	Met Ala Arg Thr Val
1635	1640	1645
Phe Ile Glu Leu Leu Ala	Trp Gln Phe Ala Ser	Pro Val Arg Trp Ile
1650	1655	1660
Glu Thr Gln Asp Leu Leu	Phe Ile Glu Glu Ala	Ala Gly Gly Leu Gly
1665	1670	1675
Val Glu Arg Phe Val Glu	Ile Gly Val Lys Ser	Ser Pro Thr Val Ala
1685	1690	1695
Gly Leu Ala Thr Asn Thr	Leu Lys Leu Pro Glu	Tyr Ala His Ser Thr
1700	1705	1710
Val Glu Val Leu Asn Ala	Glu Arg Asp Ala Ala	Val Leu Phe Ala Thr
1715	1720	1725
Asp Thr Asp Pro Glu Pro	Glu Pro Glu Glu Asp	Glu Pro Val Ala Glu
1730	1735	1740
Ser Pro Ala Pro Asp Val	Val Ser Glu Ala Ala	Pro Val Ala Pro Ala
1745	1750	1755
Ala Ser Ser Ala Gly Pro	Arg Pro Asp Asp Leu	Val Phe Asp Ala Ala
1765	1770	1775
Asp Ala Thr Leu Ala Leu	Ile Ala Leu Ser Ala	Lys Met Arg Ile Asp
1780	1785	1790
Gln Ile Glu Glu Leu Asp	Ser Ile Glu Ser Ile	Thr Asp Gly Ala Ser
1795	1800	1805
Ser Arg Arg Asn Gln Leu	Leu Val Asp Leu Gly	Ser Glu Leu Asn Leu
1810	1815	1820
Gly Ala Ile Asp Gly Ala	Ala Ala Glu Ser Asp	Leu Ala Gly Leu Arg Ser
1825	1830	1835
Gln Val Thr Lys Leu Ala	Arg Thr Tyr Lys Pro	Tyr Gly Pro Val Leu
1845	1850	1855
Ser Asp Ala Ile Asn Asp	Gln Leu Arg Thr Val	Leu Gly Pro Ser Gly
1860	1865	1870
Lys Arg Pro Gly Ala Ile	Ala Glu Arg Val Lys	Lys Thr Trp Glu Leu
1875	1880	1885
Gly Glu Gly Trp Ala Lys	His Val Thr Val Glu	Val Ala Leu Gly Thr
1890	1895	1900
Arg Glu Gly Ser Ser Val	Arg Gly Gly Ala Met	Gly His Leu His Glu
1905	1910	1915
Gly Ala Leu Ala Asp Ala	Ala Ser Val Asp Lys	Val Ile Asp Ala Ala
1925	1930	1935
Val Ala Ser Val Ala Ala	Arg Gln Gly Val Ser	Val Ala Leu Pro Ser
1940	1945	1950
Ala Gly Ser Gly Gly Gly	Ala Thr Ile Asp Ala	Ala Ala Leu Ser Glu
1955	1960	1965
Phe Thr Asp Gln Ile Thr	Gly Arg Glu Gly Val	Leu Ala Ser Ala Ala
1970	1975	1980
Arg Leu Val Leu Gly Gln	Leu Gly Leu Asp Asp	Pro Val Asn Ala Leu
1985	1990	1995
Pro Ala Ala Pro Asp Ser	Glu Leu Ile Asp Leu	Val Thr Ala Glu Leu
2005	2010	2015
Gly Ala Asp Trp Pro Arg	Leu Val Ala Pro Val	Phe Asp Pro Lys Lys
2020	2025	2030

Ala Val Val Phe Asp Asp Arg Trp Ala Ser Ala Arg Glu Asp Leu Val
 2035 2040 2045
 Lys Leu Trp Leu Thr Asp Glu Gly Asp Ile Asp Ala Asp Trp Pro Arg
 2050 2055 2060
 Leu Ala Glu Arg Phe Glu Gly Ala Gly His Val Val Ala Thr Gln Ala
 2065 2070 2075 2080
 Thr Trp Trp Gln Gly Lys Ser Leu Ala Ala Gly Arg Gln Ile His Ala
 2085 2090 2095
 Ser Leu Tyr Gly Arg Ile Ala Ala Gly Ala Glu Asn Pro Glu Pro Gly
 2100 2105 2110
 Arg Tyr Gly Gly Glu Val Ala Val Val Thr Gly Ala Ser Lys Gly Ser
 2115 2120 2125
 Ile Ala Ala Ser Val Val Ala Arg Leu Leu Asp Gly Gly Ala Thr Val
 2130 2135 2140
 Ile Ala Thr Thr Ser Lys Leu Asp Glu Glu Arg Leu Ala Phe Tyr Arg
 2145 2150 2155 2160
 Thr Leu Tyr Arg Asp His Ala Arg Tyr Gly Ala Ala Leu Trp Leu Val
 2165 2170 2175
 Ala Ala Asn Met Ala Ser Tyr Ser Asp Val Asp Ala Leu Val Glu Trp
 2180 2185 2190
 Ile Gly Thr Glu Gln Thr Glu Ser Leu Gly Pro Gln Ser Ile His Ile
 2195 2200 2205
 Lys Asp Ala Gln Thr Pro Thr Leu Leu Phe Pro Phe Ala Ala Pro Arg
 2210 2215 2220
 Val Val Gly Asp Leu Ser Glu Ala Gly Ser Arg Ala Glu Met Glu Met
 2225 2230 2235 2240
 Lys Val Leu Leu Trp Ala Val Gln Arg Leu Ile Gly Gly Leu Ser Thr
 2245 2250 2255
 Ile Gly Ala Glu Arg Asp Ile Ala Ser Arg Leu His Val Val Leu Pro
 2260 2265 2270
 Gly Ser Pro Asn Arg Gly Met Phe Gly Gly Asp Gly Ala Tyr Gly Glu
 2275 2280 2285
 Ala Lys Ser Ala Leu Asp Ala Val Val Ser Arg Trp His Ala Glu Ser
 2290 2295 2300
 Ser Trp Ala Ala Arg Val Ser Leu Ala His Ala Leu Ile Gly Trp Thr
 2305 2310 2315 2320
 Arg Gly Thr Gly Leu Met Gly His Asn Asp Ala Ile Val Ala Ala Val
 2325 2330 2335
 Glu Glu Ala Gly Val Thr Thr Tyr Ser Thr Asp Glu Met Ala Ala Leu
 2340 2345 2350
 Leu Leu Asp Leu Cys Asp Ala Glu Ser Lys Val Ala Ala Ala Arg Ser
 2355 2360 2365
 Pro Ile Lys Ala Asp Leu Thr Gly Gly Leu Ala Glu Ala Asn Leu Asp
 2370 2375 2380
 Met Ala Glu Leu Ala Ala Lys Ala Arg Glu Gln Met Ser Ala Ala Ala
 2385 2390 2395 2400
 Ala Val Asp Glu Asp Ala Glu Ala Pro Gly Ala Ile Ala Ala Leu Pro
 2405 2410 2415
 Ser Pro Pro Arg Gly Phe Thr Pro Ala Pro Pro Pro Gln Trp Asp Asp
 2420 2425 2430
 Leu Asp Val Asp Pro Ala Asp Leu Val Val Ile Val Gly Gly Ala Glu
 2435 2440 2445
 Ile Gly Pro Tyr Gly Ser Ser Arg Thr Arg Phe Glu Met Glu Val Glu
 2450 2455 2460
 Asn Glu Leu Ser Ala Ala Gly Val Leu Glu Leu Ala Trp Thr Thr Gly
 2465 2470 2475 2480
 Leu Ile Arg Trp Glu Asp Asp Pro Gln Pro Gly Trp Tyr Asp Thr Glu

2485										2490					2495							
Ser	Gly	Glu	Met	Val	Asp	Glu	Ser	Glu	Leu	Val	Gln	Arg	Tyr	His	Asp							
2500										2505					2510							
Ala	Val	Val	Gln	Arg	Val	Gly	Ile	Arg	Glu	Phe	Val	Asp	Asp	Gly	Ala							
2515										2520					2525							
Ile	Asp	Pro	Asp	His	Ala	Ser	Pro	Leu	Leu	Val	Ser	Val	Phe	Leu	Glu							
2530										2535					2540							
Lys	Asp	Phe	Ala	Phe	Val	Val	Ser	Ser	Glu	Ala	Asp	Ala	Arg	Ala	Phe							
2545										2550					2555							
Val	Glu	Phe	Asp	Pro	Glu	His	Thr	Val	Ile	Arg	Pro	Val	Pro	Asp	Ser							
2565										2570					2575							
Thr	Asp	Trp	Gln	Val	Ile	Arg	Lys	Ala	Gly	Thr	Glu	Ile	Arg	Val	Pro							
2580										2585					2590							
Arg	Lys	Thr	Lys	Leu	Ser	Arg	Val	Val	Gly	Gly	Gln	Ile	Pro	Thr	Gly							
2595										2600					2605							
Phe	Asp	Pro	Thr	Val	Trp	Gly	Ile	Ser	Ala	Asp	Met	Ala	Gly	Ser	Ile							
2610										2615					2620							
Asp	Arg	Leu	Ala	Val	Trp	Asn	Met	Val	Ala	Thr	Val	Asp	Ala	Phe	Leu							
2625										2630					2635							
Ser	Ser	Gly	Phe	Ser	Pro	Ala	Glu	Val	Met	Arg	Tyr	Val	His	Pro	Ser							
2645										2650					2655							
Leu	Val	Ala	Asn	Thr	Gln	Gly	Thr	Gly	Met	Gly	Gly	Gly	Thr	Ser	Met							
2660										2665					2670							
Gln	Thr	Met	Tyr	His	Gly	Asn	Leu	Leu	Gly	Arg	Asn	Lys	Pro	Asn	Asp							
2675										2680					2685							
Ile	Phe	Gln	Glu	Val	Leu	Pro	Asn	Ile	Ile	Ala	Ala	His	Val	Val	Gln							
2690										2695					2700							
Ser	Tyr	Val	Gly	Ser	Tyr	Gly	Ala	Met	Ile	His	Pro	Val	Ala	Ala	Cys							
2705										2710					2715							
Ala	Thr	Ala	Ala	Val	Ser	Val	Glu	Glu	Gly	Val	Asp	Lys	Ile	Arg	Leu							
2725										2730					2735							
Gly	Lys	Ala	Gln	Leu	Val	Val	Ala	Gly	Gly	Leu	Asp	Asp	Leu	Thr	Leu							
2740										2745					2750							
Glu	Gly	Ile	Ile	Gly	Phe	Gly	Asp	Met	Ala	Ala	Thr	Ala	Asp	Thr	Ser							
2755										2760					2765							
Met	Met	Cys	Gly	Arg	Gly	Ile	His	Asp	Ser	Lys	Phe	Ser	Arg	Pro	Asn							
2770										2775					2780							
Asp	Arg	Arg	Arg	Leu	Gly	Phe	Val	Glu	Ala	Gln	Gly	Gly	Gly	Thr	Ile							
2785										2790					2795							
Leu	Leu	Ala	Arg	Gly	Asp	Leu	Ala	Leu	Arg	Met	Gly	Leu	Pro	Val	Leu							
2805										2810					2815							
Ala	Val	Val	Ala	Phe	Ala	Gln	Ser	Phe	Gly	Asp	Gly	Val	His	Thr	Ser							
2820										2825					2830							
Ile	Pro	Ala	Pro	Gly	Leu	Gly	Ala	Leu	Gly	Ala	Gly	Arg	Gly	Gly	Lys							
2835										2840					2845							
Asp	Ser	Pro	Leu	Ala	Arg	Ala	Leu	Ala	Lys	Leu	Gly	Val	Ala	Ala	Asp							
2850										2855					2860							
Asp	Val	Ala	Val	Ile	Ser	Lys	His	Asp	Thr	Ser	Thr	Leu	Ala	Asn	Asp							
2865										2870					2875							
Pro	Asn	Glu	Thr	Glu	Leu	His	Glu	Arg	Leu	Ala	Asp	Ala	Leu	Gly	Arg							
2885										2890					2895							
Ser	Glu	Gly	Ala	Pro	Leu	Phe	Val	Val	Ser	Gln	Lys	Ser	Leu	Thr	Gly							
2900										2905					2910							
His	Ala	Lys	Gly	Gly	Ala	Ala	Val	Phe	Gln	Met	Met	Gly	Leu	Cys	Gln							
2915										2920					2925							
Ile	Leu	Arg	Asp	Gly	Val	Ile	Pro	Pro	Asn	Arg	Ser	Leu	Asp	Cys	Val							
2930										2935					2940							

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Asp Asp Glu Leu Ala Gly Ser Ala His Phe Val Trp Val Arg Asp Thr
2945                2950                2955                2960
Leu Arg Leu Gly Gly Lys Phe Pro Leu Lys Ala Gly Met Leu Thr Ser
                2965                2970                2975
Leu Gly Phe Gly His Val Ser Gly Leu Val Ala Leu Val His Pro Gln
                2980                2985                2990
Ala Phe Ile Ala Ser Leu Asp Pro Ala Gln Arg Ala Asp Tyr Gln Arg
                2995                3000                3005
Arg Ala Asp Ala Arg Leu Leu Ala Gly Gln Arg Arg Leu Ala Ser Ala
                3010                3015                3020
Ile Ala Gly Gly Ala Pro Met Tyr Gln Arg Pro Gly Asp Arg Arg Phe
3025                3030                3035                3040
Asp His His Ala Pro Glu Arg Pro Gln Glu Ala Ser Met Leu Leu Asn
                3045                3050                3055
Pro Ala Ala Arg Leu Gly Asp Gly Glu Ala Tyr Ile Gly
                3060                3065

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<210> 247
<211> 904
<212> PRT
<213> Mycobacterium tuberculosis

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<400> 247
Val Gln Thr His Glu Ile Arg Lys Arg Phe Leu Asp His Phe Val Lys
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Ala Gly His Thr Glu Val Pro Ser Ala Ser Val Ile Leu Asp Asp Pro
                20                25                30
Asn Leu Leu Phe Val Asn Ala Gly Met Val Gln Phe Val Pro Phe Phe
 35                40                45
Leu Gly Gln Arg Thr Pro Pro Tyr Pro Thr Ala Thr Ser Ile Gln Lys
 50                55                60
Cys Ile Arg Thr Pro Asp Ile Asp Glu Val Gly Ile Thr Thr Arg His
65                70                75                80
Asn Thr Phe Phe Gln Met Ala Gly Asn Phe Ser Phe Gly Asp Tyr Phe
                85                90                95
Lys Arg Gly Ala Ile Glu Leu Ala Trp Ala Leu Leu Thr Asn Ser Leu
                100                105                110
Ala Ala Gly Gly Tyr Gly Leu Asp Pro Glu Arg Ile Trp Thr Thr Val
                115                120                125
Tyr Phe Asp Asp Asp Glu Ala Val Arg Leu Trp Gln Glu Val Ala Gly
 130                135                140
Leu Pro Ala Glu Arg Ile Gln Arg Arg Gly Met Ala Asp Asn Tyr Trp
145                150                155                160
Ser Met Gly Ile Pro Gly Pro Cys Gly Pro Ser Ser Glu Ile Tyr Tyr
                165                170                175
Asp Arg Gly Pro Glu Phe Gly Pro Ala Gly Gly Pro Ile Val Ser Glu
                180                185                190
Asp Arg Tyr Leu Glu Val Trp Asn Leu Val Phe Met Gln Asn Glu Arg
                195                200                205
Gly Glu Gly Thr Thr Lys Glu Asp Tyr Gln Ile Leu Gly Pro Leu Pro
 210                215                220
Arg Lys Asn Ile Asp Thr Gly Met Gly Val Glu Arg Ile Ala Leu Val
225                230                235                240
Leu Gln Asp Val His Asn Val Tyr Glu Thr Asp Leu Leu Arg Pro Val
                245                250                255
Ile Asp Thr Val Ala Arg Val Ala Ala Arg Ala Tyr Asp Val Gly Asn
                260                265                270

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His	Glu	Asp	Asp	Val	Arg	Tyr	Arg	Ile	Ile	Ala	Asp	His	Ser	Arg	Thr	275	280	285
Ala	Ala	Ile	Leu	Ile	Gly	Asp	Gly	Val	Ser	Pro	Gly	Asn	Asp	Gly	Arg	290	295	300
Gly	Tyr	Val	Leu	Arg	Arg	Leu	Leu	Arg	Arg	Val	Ile	Arg	Ser	Ala	Lys	305	310	315
Leu	Leu	Gly	Ile	Asp	Ala	Ala	Ile	Val	Gly	Asp	Leu	Met	Ala	Thr	Val	325	330	335
Arg	Asn	Ala	Met	Gly	Pro	Ser	Tyr	Pro	Glu	Leu	Val	Ala	Asp	Phe	Glu	340	345	350
Arg	Ile	Ser	Arg	Ile	Ala	Val	Ala	Glu	Glu	Thr	Ala	Phe	Asn	Arg	Thr	355	360	365
Leu	Ala	Ser	Gly	Ser	Arg	Leu	Phe	Glu	Glu	Val	Ala	Ser	Ser	Thr	Lys	370	375	380
Lys	Ser	Gly	Ala	Thr	Val	Leu	Ser	Gly	Ser	Asp	Ala	Phe	Thr	Leu	His	385	390	395
Asp	Thr	Tyr	Gly	Phe	Pro	Ile	Glu	Leu	Thr	Leu	Glu	Met	Ala	Ala	Glu	405	410	415
Thr	Gly	Leu	Gln	Val	Asp	Glu	Ile	Gly	Phe	Arg	Glu	Leu	Met	Ala	Glu	420	425	430
Gln	Arg	Arg	Arg	Ala	Lys	Ala	Asp	Ala	Ala	Ala	Arg	Lys	His	Ala	His	435	440	445
Ala	Asp	Leu	Ser	Ala	Tyr	Arg	Glu	Leu	Val	Asp	Ala	Gly	Ala	Thr	Glu	450	455	460
Phe	Thr	Gly	Phe	Asp	Glu	Leu	Arg	Ser	Gln	Ala	Arg	Ile	Leu	Gly	Ile	465	470	475
Phe	Val	Asp	Gly	Lys	Arg	Val	Pro	Val	Val	Ala	His	Gly	Val	Ala	Gly	485	490	495
Gly	Ala	Gly	Glu	Gly	Gln	Arg	Val	Glu	Leu	Val	Leu	Asp	Arg	Thr	Pro	500	505	510
Leu	Tyr	Ala	Glu	Ser	Gly	Gly	Gln	Ile	Ala	Asp	Glu	Gly	Thr	Ile	Ser	515	520	525
Gly	Thr	Gly	Ser	Ser	Glu	Ala	Ala	Arg	Ala	Ala	Val	Thr	Asp	Val	Gln	530	535	540
Lys	Ile	Ala	Lys	Thr	Leu	Trp	Val	His	Arg	Val	Asn	Val	Glu	Ser	Gly	545	550	555
Glu	Phe	Val	Glu	Gly	Asp	Thr	Val	Ile	Ala	Ala	Val	Asp	Pro	Gly	Trp	565	570	575
Arg	Arg	Gly	Ala	Thr	Gln	Gly	His	Ser	Gly	Thr	His	Met	Val	His	Ala	580	585	590
Ala	Leu	Arg	Gln	Val	Leu	Gly	Pro	Asn	Ala	Val	Gln	Ala	Gly	Ser	Leu	595	600	605
Asn	Arg	Pro	Gly	Tyr	Leu	Arg	Phe	Asp	Phe	Asn	Trp	Gln	Gly	Pro	Leu	610	615	620
Thr	Asp	Asp	Gln	Arg	Thr	Gln	Val	Glu	Glu	Val	Thr	Asn	Glu	Ala	Val	625	630	635
Gln	Ala	Asp	Phe	Glu	Val	Arg	Thr	Phe	Thr	Glu	Gln	Leu	Asp	Lys	Ala	645	650	655
Lys	Ala	Met	Gly	Ala	Ile	Ala	Leu	Phe	Gly	Glu	Ser	Tyr	Pro	Asp	Glu	660	665	670
Val	Arg	Val	Val	Glu	Met	Gly	Gly	Pro	Phe	Ser	Leu	Glu	Leu	Cys	Gly	675	680	685
Gly	Thr	His	Val	Ser	Asn	Thr	Ala	Gln	Ile	Gly	Pro	Val	Thr	Ile	Leu	690	695	700
Gly	Glu	Ser	Ser	Ile	Gly	Ser	Gly	Val	Arg	Arg	Val	Glu	Ala	Tyr	Val	705	710	715
Gly	Leu	Asp	Ser	Phe	Arg	His	Leu	Ala	Lys	Glu	Arg	Ala	Leu	Met	Ala	720		

[illegible]

<210> 248

<211> 423

<212> PRT

<213> Mycobacterium tuberculosis

<400> 248

Val 1	Thr	Glu	Phe	Ser 5	Ser	Phe	Ser	Ala	Pro 10	Lys	Gly	Val	Pro	Asp 15	Tyr
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			20					25					30		
Ala	Ala	Ala	Arg	Gln	Ala	Gly	Tyr	Ser	His	Ile	Glu	Leu	Pro	Ile	Phe
		35					40					45			
Glu	Asp	Thr	Ala	Leu	Phe	Ala	Arg	Gly	Val	Gly	Glu	Ser	Thr	Asp	Val
	50						55				60				
Val	Ser	Lys	Glu	Met	Tyr	Thr	Phe	Ala	Asp	Arg	Gly	Asp	Arg	Ser	Val
65					70					75					80
Thr	Leu	Arg	Pro	Glu	Gly	Thr	Ala	Gly	Val	Val	Arg	Ala	Val	Ile	Glu
				85					90					95	
His	Gly	Leu	Asp	Arg	Gly	Ala	Leu	Pro	Val	Lys	Leu	Cys	Tyr	Ala	Gly
			100					105					110		
Pro	Phe	Phe	Arg	Tyr	Glu	Arg	Pro	Gln	Ala	Gly	Arg	Tyr	Arg	Gln	Leu
		115					120					125			
Gln	Gln	Val	Gly	Val	Glu	Ala	Ile	Gly	Val	Asp	Asp	Pro	Ala	Leu	Asp
	130					135					140				
Ala	Glu	Val	Ile	Ala	Ile	Ala	Asp	Ala	Gly	Phe	Arg	Ser	Leu	Gly	Leu
145					150					155					160
Asp	Gly	Phe	Arg	Leu	Glu	Ile	Thr	Ser	Leu	Gly	Asp	Glu	Ser	Cys	Arg
				165					170					175	
Pro	Gln	Tyr	Arg	Glu	Leu	Leu	Gln	Glu	Phe	Leu	Phe	Gly	Leu	Asp	Leu
			180					185					190		
Asp	Glu	Asp	Thr	Arg	Arg	Arg	Ala	Gly	Ile	Asn	Pro	Leu	Arg	Val	Leu
		195					200					205			
Asp	Asp	Lys	Arg	Pro	Glu	Leu	Arg	Ala	Met	Thr	Ala	Ser	Ala	Pro	Val

210	215	220
Leu Leu Asp His Leu Ser Asp Val Ala Lys Gln His Phe Asp Thr Val		
225	230	235
Leu Ala His Leu Asp Ala Leu Gly Val Pro Tyr Val Ile Asn Pro Arg		240
	245	250
Met Val Arg Gly Leu Asp Tyr Tyr Thr Lys Thr Ala Phe Glu Phe Val		255
	260	265
His Asp Gly Leu Gly Ala Gln Ser Gly Ile Gly Gly Gly Gly Arg Tyr		270
	275	280
Asp Gly Leu Met His Gln Leu Gly Gly Gln Asp Leu Ser Gly Ile Gly		285
	290	295
Phe Gly Leu Gly Val Asp Arg Thr Val Leu Ala Leu Arg Ala Glu Gly		300
305	310	315
Lys Thr Ala Gly Asp Ser Ala Arg Cys Asp Val Phe Gly Val Pro Leu		320
	325	330
Gly Glu Ala Ala Lys Leu Arg Leu Ala Val Leu Ala Gly Arg Leu Arg		335
	340	345
Ala Ala Gly Val Arg Val Asp Leu Ala Tyr Gly Asp Arg Gly Leu Lys		350
	355	360
Gly Ala Met Arg Ala Ala Ala Arg Ser Gly Ala Arg Val Ala Leu Val		365
	370	375
Ala Gly Asp Arg Asp Ile Glu Ala Gly Thr Val Ala Val Lys Asp Leu		380
385	390	395
Thr Thr Gly Glu Gln Val Ser Val Ser Met Asp Ser Val Val Ala Glu		400
	405	410
Val Ile Ser Arg Leu Ala Gly		415
	420	

<210> 249

<211> 692

<212> PRT

<213> Mycobacterium tuberculosis

<400> 249

Met Ser Ala Pro Ala Gln Pro Ala Pro Gly Val Asp Gly Gly Asp Pro	
1	5
Ser Gln Ala Arg Ile Arg Val Pro Ala Gly Thr Thr Ala Ala Thr Ala	10
	20
Val Gly Glu Ala Gly Leu Pro Arg Arg Gly Thr Pro Asp Ala Ile Val	25
	35
Val Val Arg Asp Ala Asp Gly Asn Leu Arg Asp Leu Ser Trp Val Pro	40
	50
Asp Val Asp Thr Asp Ile Thr Pro Val Ala Ala Asn Thr Asp Asp Gly	55
65	70
Arg Ser Val Ile Arg His Ser Thr Ala His Val Leu Ala Gln Ala Val	75
	85
Gln Glu Leu Phe Pro Gln Ala Lys Leu Gly Ile Gly Pro Pro Ile Thr	90
	100
Asp Gly Phe Tyr Tyr Asp Phe Asp Val Pro Glu Pro Phe Thr Pro Glu	105
	115
Asp Leu Ala Ala Leu Glu Lys Arg Met Arg Gln Ile Val Lys Glu Gly	120
	130
Gln Leu Phe Asp Arg Arg Val Tyr Glu Ser Thr Glu Gln Ala Arg Ala	135
145	150
Glu Leu Ala Asn Glu Pro Tyr Lys Leu Glu Leu Val Asp Asp Lys Ser	155
	165
Gly Asp Ala Glu Ile Met Glu Val Gly Gly Asp Glu Leu Thr Ala Tyr	170
	175

			180					185					190			
Asp	Asn	Leu	Asn	Pro	Arg	Thr	Arg	Glu	Arg	Val	Trp	Gly	Asp	Leu	Cys	
		195					200					205				
Arg	Gly	Pro	His	Ile	Pro	Thr	Thr	Lys	His	Ile	Pro	Ala	Phe	Lys	Leu	
	210					215					220					
Thr	Arg	Ser	Ser	Ala	Ala	Tyr	Trp	Arg	Gly	Asp	Gln	Lys	Asn	Ala	Ser	
225					230					235					240	
Leu	Gln	Arg	Ile	Tyr	Gly	Thr	Ala	Trp	Glu	Ser	Gln	Glu	Ala	Leu	Asp	
				245					250					255		
Arg	His	Leu	Glu	Phe	Ile	Glu	Glu	Ala	Gln	Arg	Arg	Asp	His	Arg	Lys	
			260					265					270			
Leu	Gly	Val	Glu	Leu	Asp	Leu	Phe	Ser	Phe	Pro	Asp	Glu	Ile	Gly	Ser	
		275					280					285				
Gly	Leu	Ala	Val	Phe	His	Pro	Lys	Gly	Gly	Ile	Val	Arg	Arg	Glu	Leu	
	290					295					300					
Glu	Asp	Tyr	Ser	Arg	Arg	Lys	His	Thr	Glu	Ala	Gly	Tyr	Gln	Phe	Val	
305					310					315					320	
Asn	Ser	Pro	His	Ile	Thr	Lys	Ala	Gln	Leu	Phe	His	Thr	Ser	Gly	His	
				325						330				335		
Leu	Asp	Trp	Tyr	Ala	Asp	Gly	Met	Phe	Pro	Pro	Met	His	Ile	Asp	Ala	
			340					345					350			
Glu	Tyr	Asn	Ala	Asp	Gly	Ser	Leu	Arg	Lys	Pro	Gly	Gln	Asp	Tyr	Tyr	
		355					360					365				
Leu	Lys	Pro	Met	Asn	Cys	Pro	Met	His	Cys	Leu	Ile	Phe	Arg	Ala	Arg	
	370					375					380					
Gly	Arg	Ser	Tyr	Arg	Glu	Leu	Pro	Leu	Arg	Leu	Phe	Glu	Phe	Gly	Thr	
385					390					395					400	
Val	Tyr	Arg	Tyr	Glu	Lys	Ser	Gly	Val	Val	His	Gly	Leu	Thr	Arg	Val	
				405					410					415		
Arg	Gly	Leu	Thr	Met	Asp	Asp	Ala	His	Ile	Phe	Cys	Thr	Arg	Asp	Gln	
			420					425					430			
Met	Arg	Asp	Glu	Leu	Arg	Ser	Leu	Leu	Arg	Phe	Val	Leu	Asp	Leu	Leu	
		435					440					445				
Ala	Asp	Tyr	Gly	Leu	Thr	Asp	Phe	Tyr	Leu	Glu	Leu	Ser	Thr	Lys	Asp	
	450					455					460					
Pro	Glu	Lys	Phe	Val	Gly	Ala	Glu	Glu	Val	Trp	Glu	Glu	Ala	Thr	Thr	
465					470					475					480	
Val	Leu	Ala	Glu	Val	Gly	Ala	Glu	Ser	Gly	Leu	Glu	Leu	Val	Pro	Asp	
				485					490					495		
Pro	Gly	Gly	Ala	Ala	Phe	Tyr	Gly	Pro	Lys	Ile	Ser	Val	Gln	Val	Lys	
			500					505					510			
Asp	Ala	Leu	Gly	Arg	Thr	Trp	Gln	Met	Ser	Thr	Ile	Gln	Leu	Asp	Phe	
		515					520					525				
Asn	Phe	Pro	Glu	Arg	Phe	Gly	Leu	Glu	Tyr	Thr	Ala	Ala	Asp	Gly	Thr	
	530					535										

Asp Val Ala Ala Gly Ala Val Ser Phe Arg Phe Gly Asp Arg Thr Gln
 645 650 655
 Ile Asn Gly Val Ala Arg Asp Asp Ala Val Ala Ala Ile Val Ala Trp
 660 665 670
 Ile Ala Asp Arg Glu Asn Ala Val Pro Thr Ala Glu Leu Val Lys Val
 675 680 685
 Ala Gly Arg Glu
 690

<210> 250

<211> 154

<212> PRT

<213> Mycobacterium tuberculosis

<400> 250

Val Ser Thr Thr Leu Ala Ile Val Arg Leu Asp Pro Gly Leu Pro Leu
 1 5 10 15
 Pro Ser Arg Ala His Asp Gly Asp Ala Gly Val Asp Leu Tyr Ser Ala
 20 25 30
 Glu Asp Val Glu Leu Ala Pro Gly Arg Arg Ala Leu Val Arg Thr Gly
 35 40 45
 Val Ala Val Ala Val Pro Phe Gly Met Val Gly Leu Val His Pro Arg
 50 55 60
 Ser Gly Leu Ala Thr Arg Val Gly Leu Ser Ile Val Asn Ser Pro Gly
 65 70 75 80
 Thr Ile Asp Ala Gly Tyr Arg Gly Glu Ile Lys Val Ala Leu Ile Asn
 85 90 95
 Leu Asp Pro Ala Ala Pro Ile Val Val His Arg Gly Asp Arg Ile Ala
 100 105 110
 Gln Leu Leu Val Gln Arg Val Glu Leu Val Glu Leu Val Glu Val Ser
 115 120 125
 Ser Phe Asp Glu Ala Gly Leu Ala Ser Thr Ser Arg Gly Asp Gly Gly
 130 135 140
 His Gly Ser Ser Gly Gly His Ala Ser Leu
 145 150

<210> 251

<211> 438

<212> PRT

<213> Mycobacterium tuberculosis

<400> 251

Met Pro Arg Arg Ser Pro Ala Asp Pro Ala Ala Ala Leu Ala Pro Arg
 1 5 10 15
 Arg Thr Thr Leu Pro Gly Gly Leu Arg Val Val Thr Glu Phe Leu Pro
 20 25 30
 Ala Val His Ser Ala Ser Val Gly Val Trp Val Gly Val Gly Ser Arg
 35 40 45
 Asp Glu Gly Ala Thr Val Ala Gly Ala Ala His Phe Leu Glu His Leu
 50 55 60
 Leu Phe Lys Ser Thr Pro Thr Arg Ser Ala Val Asp Ile Ala Gln Ala
 65 70 75 80
 Met Asp Ala Val Gly Gly Glu Leu Asn Ala Phe Thr Ala Lys Glu His
 85 90 95
 Thr Cys Tyr Tyr Ala His Val Leu Gly Ser Asp Leu Pro Leu Ala Val
 100 105 110
 Asp Leu Val Ala Asp Val Val Leu Asn Gly Arg Cys Ala Ala Asp Asp

Val	Glu	Val	Glu	Arg	Asp	Val	Val	Leu	Glu	Glu	Ile	Ala	Met	Arg	Asp
130						135						140			
Asp	Asp	Pro	Glu	Asp	Ala	Leu	Ala	Asp	Met	Phe	Leu	Ala	Ala	Leu	Phe
145					150					155					160
Gly	Asp	His	Pro	Val	Gly	Arg	Pro	Val	Ile	Gly	Ser	Ala	Gln	Ser	Val
				165					170					175	
Ser	Val	Met	Thr	Arg	Ala	Gln	Leu	Gln	Ser	Phe	His	Leu	Arg	Arg	Tyr
			180					185					190		
Thr	Pro	Glu	Arg	Met	Val	Val	Ala	Ala	Ala	Gly	Asn	Val	Asp	His	Asp
	195						200					205			
Gly	Leu	Val	Ala	Leu	Val	Arg	Glu	His	Phe	Gly	Ser	Arg	Leu	Val	Arg
	210					215					220				
Gly	Arg	Arg	Pro	Val	Ala	Pro	Arg	Lys	Gly	Thr	Gly	Arg	Val	Asn	Gly
225					230					235					240
Ser	Pro	Arg	Leu	Thr	Leu	Val	Ser	Arg	Asp	Ala	Glu	Gln	Thr	His	Val
			245						250					255	
Ser	Leu	Gly	Ile	Arg	Thr	Pro	Gly	Arg	Gly	Trp	Glu	His	Arg	Trp	Ala
		260					265						270		
Leu	Ser	Val	Leu	His	Thr	Ala	Leu	Gly	Gly	Gly	Leu	Ser	Ser	Arg	Leu
		275					280					285			
Phe	Gln	Glu	Val	Arg	Glu	Thr	Arg	Gly	Leu	Ala	Tyr	Ser	Val	Tyr	Ser
	290					295					300				
Ala	Leu	Asp	Leu	Phe	Ala	Asp	Ser	Gly	Ala	Leu	Ser	Val	Tyr	Ala	Ala
305					310					315					320
Cys	Leu	Pro	Glu	Arg	Phe	Ala	Asp	Val	Met	Arg	Val	Thr	Ala	Asp	Val
			325						330				335		
Leu	Glu	Ser	Val	Ala	Arg	Asp	Gly	Ile	Thr	Glu	Ala	Glu	Cys	Gly	Ile
		340					345					350			
Ala	Lys	Gly	Ser	Leu	Arg	Gly	Gly	Leu	Val	Leu	Gly	Leu	Glu	Asp	Ser
		355				360					365				
Ser	Ser	Arg	Met	Ser	Arg	Leu	Gly	Arg	Ser	Glu	Leu	Asn	Tyr	Gly	Lys
	370					375					380				
His	Arg	Ser	Ile	Glu	His	Thr	Leu	Arg	Gln	Ile	Glu	Gln	Val	Thr	Val
385					390					395					400
Glu	Glu	Val	Asn	Ala	Val	Ala	Arg	His	Leu	Leu	Ser	Arg	Arg	Tyr	Gly
			405						410					415	
Ala	Ala	Val	Leu	Gly	Pro	His	Gly	Ser	Lys	Arg	Ser	Leu	Pro	Gln	Gln
			420				425						430		
Leu	Arg	Ala	Met	Val	Gly										
			435												

<210> 252

<211> 752

<212> PRT

<213> Mycobacterium tuberculosis

<400> 252

Met	Ser	Ala	Ala	Glu	Ile	Asp	Glu	Gly	Val	Phe	Glu	Thr	Thr	Ala	Thr
1				5					10					15	
Ile	Asp	Asn	Gly	Ser	Phe	Gly	Thr	Arg	Thr	Ile	Arg	Phe	Glu	Thr	Gly
		20					25					30			
Arg	Leu	Ala	Leu	Gln	Ala	Ala	Gly	Ala	Val	Val	Ala	Tyr	Leu	Asp	Asp
		35					40					45			
Asp	Asn	Met	Leu	Leu	Ser	Ala	Thr	Thr	Ala	Ser	Lys	Asn	Pro	Lys	Glu
	50					55					60				
His	Phe	Asp	Phe	Phe	Pro	Leu	Thr	Val	Asp	Val	Glu	Glu	Arg	Met	Tyr

65					70					75				80	
Ala	Ala	Gly	Arg	Ile	Pro	Gly	Ser	Phe	Phe	Arg	Arg	Glu	Gly	Arg	Pro
				85					90					95	
Ser	Thr	Asp	Ala	Ile	Leu	Thr	Cys	Arg	Leu	Ile	Asp	Arg	Pro	Leu	Arg
			100					105					110		
Pro	Ser	Phe	Val	Asp	Gly	Leu	Arg	Asn	Glu	Ile	Gln	Ile	Val	Val	Thr
		115					120					125			
Ile	Leu	Ser	Leu	Asp	Pro	Gly	Asp	Leu	Tyr	Asp	Val	Leu	Ala	Ile	Asn
	130					135					140				
Ala	Ala	Ser	Ala	Ser	Thr	Gln	Leu	Gly	Gly	Leu	Pro	Phe	Ser	Gly	Pro
145					150					155					160
Ile	Gly	Gly	Val	Arg	Val	Ala	Leu	Ile	Asp	Gly	Thr	Trp	Val	Gly	Phe
			165						170					175	
Pro	Thr	Val	Asp	Gln	Ile	Glu	Arg	Ala	Val	Phe	Asp	Met	Val	Val	Ala
			180					185					190		
Gly	Arg	Ile	Val	Glu	Gly	Asp	Val	Ala	Ile	Met	Met	Val	Glu	Ala	Glu
	195					200						205			
Ala	Thr	Glu	Asn	Val	Val	Glu	Leu	Val	Glu	Gly	Gly	Ala	Gln	Ala	Pro
	210					215					220				
Thr	Glu	Ser	Val	Val	Ala	Ala	Gly	Leu	Glu	Ala	Ala	Lys	Pro	Phe	Ile
225					230					235					240
Ala	Ala	Leu	Cys	Thr	Ala	Gln	Gln	Glu	Leu	Ala	Asp	Ala	Ala	Gly	Lys
			245					250						255	
Ser	Gly	Lys	Pro	Thr	Val	Asp	Phe	Pro	Val	Phe	Pro	Asp	Tyr	Gly	Glu
			260				265						270		
Asp	Val	Tyr	Tyr	Ser	Val	Ser	Ser	Val	Ala	Thr	Asp	Glu	Leu	Ala	Ala
	275					280						285			
Ala	Leu	Thr	Ile	Gly	Gly	Lys	Ala	Glu	Arg	Asp	Gln	Arg	Ile	Asp	Glu
	290					295					300				
Ile	Lys	Thr	Gln	Val	Val	Gln	Arg	Leu	Ala	Asp	Thr	Tyr	Glu	Gly	Arg
305					310					315					320
Glu	Lys	Glu	Val	Gly	Ala	Ala	Leu	Arg	Ala	Leu	Thr	Lys	Lys	Leu	Val
			325					330						335	
Arg	Gln	Arg	Ile	Leu	Thr	Asp	His	Phe	Arg	Ile	Asp	Gly	Arg	Gly	Ile
			340					345					350		
Thr	Asp	Ile	Arg	Ala	Leu	Ser	Ala	Glu	Val	Ala	Val	Val	Pro	Arg	Ala
	355					360						365			
His	Gly	Ser	Ala	Leu	Phe	Glu	Arg	Gly	Glu	Thr	Gln	Ile	Leu	Gly	Val
	370					375					380				
Thr	Thr	Leu	Asp	Met	Ile	Lys	Met	Ala	Gln	Gln	Ile	Asp	Ser	Leu	Gly
385					390					395					400
Pro	Glu	Thr	Ser	Lys	Arg	Tyr	Met	His	His	Tyr	Asn	Phe	Pro	Pro	Phe
			405						410					415	
Ser	Thr	Gly	Glu	Thr	Gly	Arg	Val	Gly	Ser	Pro	Lys	Arg	Arg	Glu	Ile
			420					425					430		
Gly	His	Gly	Ala	Leu	Ala	Glu	Arg	Ala	Leu	Val	Pro	Val	Leu	Pro	Ser
	435					440						445			
Val	Glu	Glu	Phe	Pro	Tyr	Ala	Ile	Arg	Gln	Val	Ser	Glu	Ala	Leu	Gly
	450					455					460				
Ser	Asn	Gly	Ser	Thr	Ser	Met	Gly	Ser	Val	Cys	Ala	Ser	Thr	Leu	Ala
465					470					475					480
Leu	Leu	Asn	Ala	Gly	Val	Pro	Leu	Lys	Ala	Pro	Val	Ala	Gly	Ile	Ala
			485					490						495	
Met	Gly	Leu	Val	Ser	Asp	Asp	Ile	Gln	Val	Glu	Gly	Ala	Val	Asp	Gly
			500					505					510		
Val	Val	Glu	Arg	Arg	Phe	Val	Thr	Leu	Thr	Asp	Ile	Leu	Gly	Ala	Glu
			515				520						525		

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Asp Ala Phe Gly Asp Met Asp Phe Lys Val Ala Gly Thr Lys Asp Phe
530                    535                    540
Val Thr Ala Leu Gln Leu Asp Thr Lys Leu Asp Gly Ile Pro Ser Gln
545                    550                    555                    560
Val Leu Ala Gly Ala Leu Glu Gln Ala Lys Asp Ala Arg Leu Thr Ile
565                    570                    575
Leu Glu Val Met Ala Glu Ala Ile Asp Arg Pro Asp Glu Met Ser Pro
580                    585                    590
Tyr Ala Pro Arg Val Thr Thr Ile Lys Val Pro Val Asp Lys Ile Gly
595                    600                    605
Glu Val Ile Gly Pro Lys Gly Lys Val Ile Asn Ala Ile Thr Glu Glu
610                    615                    620
Thr Gly Ala Gln Ile Ser Ile Glu Asp Asp Gly Thr Val Phe Val Gly
625                    630                    635                    640
Ala Thr Asp Gly Pro Ser Ala Gln Ala Ala Ile Asp Lys Ile Asn Ala
645                    650                    655
Ile Ala Asn Pro Gln Leu Pro Thr Val Gly Glu Arg Phe Leu Gly Thr
660                    665                    670
Val Val Lys Thr Thr Asp Phe Gly Ala Phe Val Ser Leu Leu Pro Gly
675                    680                    685
Arg Asp Gly Leu Val His Ile Ser Lys Leu Gly Lys Gly Lys Arg Ile
690                    695                    700
Ala Lys Val Glu Asp Val Val Asn Val Gly Asp Lys Leu Arg Val Glu
705                    710                    715                    720
Ile Ala Asp Ile Asp Lys Arg Gly Lys Ile Ser Leu Ile Leu Val Ala
725                    730                    735
Asp Glu Asp Ser Thr Ala Ala Ala Thr Asp Ala Ala Thr Val Thr Ser
740                    745                    750

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<210> 253

<211> 298

<212> PRT

<213> Mycobacterium tuberculosis

<400> 253

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Met Ser Ala Thr Gly Pro Gly Ile Val Val Ile Asp Lys Pro Ala Gly
1      5      10
Met Thr Ser His Asp Val Val Gly Arg Cys Arg Arg Ile Phe Ala Thr
20     25
Arg Arg Val Gly His Ala Gly Thr Leu Asp Pro Met Ala Thr Gly Val
35     40     45
Leu Val Ile Gly Ile Glu Arg Ala Thr Lys Ile Leu Gly Leu Leu Thr
50     55     60
Ala Ala Pro Lys Ser Tyr Ala Ala Thr Ile Arg Leu Gly Gln Thr Thr
65     70     75     80
Ser Thr Glu Asp Ala Glu Gly Gln Val Leu Gln Ser Val Pro Ala Lys
85     90     95
His Leu Thr Ile Glu Ala Ile Asp Ala Ala Met Glu Arg Leu Arg Gly
100    105    110
Glu Ile Arg Gln Val Pro Ser Ser Val Ser Ala Ile Lys Val Gly Gly
115    120    125
Arg Arg Ala Tyr Arg Leu Ala Arg Gln Gly Arg Ser Val Gln Leu Glu
130    135    140
Ala Arg Pro Ile Arg Ile Asp Arg Phe Glu Leu Leu Ala Ala Arg Arg
145    150    155    160
Arg Asp Gln Leu Ile Asp Ile Asp Val Glu Ile Asp Cys Ser Ser Gly
165    170    175

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Thr Tyr Ile Arg Ala Leu Ala Arg Asp Leu Gly Asp Ala Leu Gly Val
 180 185 190
 Gly Gly His Val Thr Ala Leu Arg Arg Thr Arg Val Gly Arg Phe Glu
 195 200 205
 Leu Asp Gln Ala Arg Ser Leu Asp Asp Leu Ala Glu Arg Pro Ala Leu
 210 215 220
 Ser Leu Ser Leu Asp Glu Ala Cys Leu Leu Met Phe Ala Arg Arg Asp
 225 230 235 240
 Leu Thr Ala Ala Glu Ala Ser Ala Ala Ala Asn Gly Arg Ser Leu Pro
 245 250 255
 Ala Val Gly Ile Asp Gly Val Tyr Ala Ala Cys Asp Ala Asp Gly Arg
 260 265 270
 Val Ile Ala Leu Leu Arg Asp Glu Gly Ser Arg Thr Arg Ser Val Ala
 275 280 285
 Val Leu Arg Pro Ala Thr Met His Pro Gly
 290 295

<210> 254

<211> 562

<212> PRT

<213> Mycobacterium tuberculosis

<400> 254

Val Pro Leu Thr Val Ala Asp Ile Asp Arg Trp Asn Ala Gln Ala Val
 1 5 10 15
 Arg Glu Val Phe His Ala Ala Ser Ala Arg Ala Glu Val Thr Phe Glu
 20 25 30
 Ala Ser Arg Gln Leu Ala Ala Leu Ser Ile Phe Ala Asn Ser Gly Gly
 35 40 45
 Lys Thr Ala Glu Ala Ala Ala His His Asn Ala Gly Ile Arg Arg Asp
 50 55 60
 Leu Asp Ala His Gly Asn Glu Ala Leu Ala Val Ala Arg Ala Ala Asp
 65 70 75 80
 Arg Ala Ala Asp Gly Ile Val Lys Val Gln Ser Glu Leu Ala Ala Leu
 85 90 95
 Arg His Ala Ala Ala Ala Glu Leu Thr Ile Asp Ala Leu Ile Asn
 100 105 110
 Arg Val Val Pro Ile Pro Gly Leu Arg Ser Thr Glu Ala Gln Trp Ala
 115 120 125
 Arg Thr Leu Ala Lys Gln Thr Glu Leu Gln Ala Glu Leu Asp Ala Ile
 130 135 140
 Met Ala Glu Ala Asn Ala Val Asp Glu Glu Leu Ala Ser Ala Val Asn
 145 150 155 160
 Met Ala Asp Gly Asp Ala Pro Ile Pro Ala Asp Ser Gly Pro Pro Val
 165 170 175
 Gly Pro Glu Gly Leu Thr Pro Thr Gln Leu Ala Ser Asp Ala Asn Glu
 180 185 190
 Glu Arg Leu Arg Glu Glu Arg Ala Arg Leu Gln Ala His Leu Glu Arg
 195 200 205
 Leu Gln Ala Glu Tyr Asp Gln Leu Ser Val Arg Ala Ala Arg Asp Tyr
 210 215 220
 His Asn Gly Ile Leu Asp Gly Asp Ala Val Gly Arg Leu Ala Ala Leu
 225 230 235 240
 Thr Asp Glu Leu Ser Ala Ala Arg Gly Arg Leu Gly Glu Leu Asp Ala
 245 250 255
 Val Asp Glu Ala Leu Ser Arg Ala Pro Glu Thr Tyr Leu Thr Gln Leu
 260 265 270

Gln Ile Pro Glu Asp Pro Asn Gln Gln Val Leu Ala Ala Val Ala Val
 275 280 285
 Gly Asn Pro Asp Thr Ala Ala Asn Val Ser Val Thr Val Pro Gly Val
 290 295 300
 Gly Ser Thr Thr Arg Gly Ala Leu Pro Gly Met Val Thr Glu Ala Arg
 305 310 315 320
 Asp Leu Arg Ser Glu Val Ile Arg Gln Leu Asn Ala Ala Gly Lys Pro
 325 330 335
 Ala Ser Val Ala Thr Ile Ala Trp Met Gly Tyr His Pro Pro Pro Asn
 340 345 350
 Pro Leu Asp Thr Gly Ser Ala Gly Asp Leu Trp Gln Thr Met Thr Asp
 355 360 365
 Gly Gln Ala His Ala Gly Ala Ala Asp Leu Ser Arg Tyr Leu Gln Gln
 370 375 380
 Val Arg Ala Asn Asn Pro Ser Gly His Leu Thr Val Leu Gly His Ser
 385 390 395 400
 Tyr Gly Ser Leu Thr Ala Ser Leu Ala Leu Gln Asp Leu Asp Ala Gln
 405 410 415
 Ser Ala His Pro Val Asn Asp Val Val Phe Tyr Gly Ser Pro Gly Leu
 420 425 430
 Glu Leu Tyr Ser Pro Ala Gln Leu Gly Leu Asp His Gly His Ala Tyr
 435 440 445
 Val Met Gln Ala Pro His Asp Leu Ile Thr Asn Leu Val Ala Pro Leu
 450 455 460
 Ala Pro Leu His Gly Trp Gly Leu Asp Pro Tyr Leu Thr Pro Gly Phe
 465 470 475 480
 Thr Glu Leu Ser Ser Gln Ala Gly Phe Asp Pro Gly Gly Ile Trp Arg
 485 490 495
 Asp Gly Val Tyr Ala His Gly Asp Tyr Pro Arg Ser Phe Leu Asp Ala
 500 505 510
 Ala Gly Gln Pro Gln Leu Arg Met Ser Gly Tyr Asn Leu Ala Ala Ile
 515 520 525
 Ala Ala Gly Leu Pro Asp Asn Thr Val Gly Pro Pro Leu Leu Pro Pro
 530 535 540
 Ile Leu Gly Gly Gly Met Pro Ala Ala Pro Gly Pro Ala Leu Arg Gly
 545 550 555 560
 Gly Arg

<210> 255

<211> 603

<212> PRT

<213> Mycobacterium tuberculosis

<400> 255

Met Val Thr Lys Thr Thr Leu Ala Ser Ala Thr Ser Gly Leu Leu Leu
 1 5 10 15
 Leu Ala Val Val Ala Met Ser Gly Cys Thr Pro Arg Pro Gln Gly Pro
 20 25 30
 Gly Pro Ala Ala Glu Lys Phe Phe Ala Ala Leu Ala Ile Gly Asp Thr
 35 40 45
 Ala Ser Ala Ala Gln Leu Ser Asp Asn Pro Asn Glu Ala Arg Glu Ala
 50 55 60
 Leu Asn Ala Ala Trp Ala Gly Leu Gln Ala Ala His Leu Asp Ala Gln
 65 70 75 80
 Val Leu Ser Ala Lys Tyr Ala Glu Asp Thr Gly Thr Val Ala Tyr Arg
 85 90 95

Phe	Ser	Trp	His	Leu	Pro	Lys	Asp	Arg	Ile	Trp	Thr	Tyr	Asp	Gly	Gln
			100					105					110		
Leu	Lys	Met	Ala	Arg	Asp	Glu	Gly	Arg	Trp	His	Val	Arg	Trp	Thr	Thr
		115					120					125			
Ser	Gly	Leu	His	Pro	Lys	Leu	Gly	Glu	His	Gln	Thr	Phe	Ala	Leu	Arg
	130					135					140				
Ala	Asp	Pro	Pro	Arg	Arg	Ala	Ser	Val	Asn	Glu	Val	Gly	Gly	Thr	Asp
145					150					155					160
Val	Leu	Val	Pro	Gly	Tyr	Leu	Tyr	His	Tyr	Ser	Leu	Asp	Ala	Gly	Gln
				165					170					175	
Ala	Gly	Arg	Glu	Leu	Phe	Gly	Thr	Ala	His	Ala	Val	Val	Gly	Ala	Leu
		180						185					190		
His	Pro	Phe	Asp	Asp	Thr	Leu	Asn	Asp	Pro	Gln	Leu	Leu	Ala	Glu	Gln
	195						200					205			
Ala	Ser	Ser	Ser	Thr	Gln	Pro	Leu	Asp	Leu	Val	Thr	Leu	His	Ala	Asp
	210					215					220				
Asp	Ser	Asn	Arg	Val	Ala	Ala	Ile	Gly	Gln	Leu	Pro	Gly	Val	Val	
225				230					235						240
Ile	Thr	Pro	Gln	Ala	Glu	Leu	Leu	Pro	Thr	Asp	Lys	His	Phe	Ala	Pro
			245						250					255	
Ala	Val	Leu	Asn	Asp	Val	Lys	Lys	Ala	Val	Val	Asp	Glu	Leu	Asp	Gly
			260					265					270		
Lys	Ala	Gly	Trp	Arg	Val	Val	Ser	Val	Asn	Gln	Asn	Gly	Val	Asp	Val
	275						280					285			
Ser	Val	Leu	His	Glu	Val	Ala	Pro	Ser	Pro	Ala	Ser	Ser	Val	Ser	Ile
	290					295					300				
Thr	Leu	Asp	Arg	Val	Val	Gln	Asn	Ala	Ala	Gln	His	Ala	Val	Asn	Thr
305				310						315					320
Arg	Gly	Gly	Lys	Ala	Met	Ile	Val	Val	Ile	Lys	Pro	Ser	Thr	Gly	Glu
			325						330					335	
Ile	Leu	Ala	Ile	Ala	Gln	Asn	Ala	Gly	Ala	Asp	Ala	Asp	Gly	Pro	Val
		340						345					350		
Ala	Thr	Thr	Gly	Leu	Tyr	Pro	Pro	Gly	Ser	Thr	Phe	Lys	Met	Ile	Thr
	355					360						365			
Ala	Gly	Ala	Ala	Val	Glu	Arg	Asp	Leu	Ala	Thr	Pro	Glu	Thr	Leu	Leu
	370				375						380				
Gly	Cys	Pro	Gly	Glu	Ile	Asp	Ile	Gly	His	Arg	Thr	Ile	Pro	Asn	Tyr
385				390						395					400
Gly	Gly	Phe	Asp	Leu	Gly	Val	Val	Pro	Met	Ser	Arg	Ala	Phe	Ala	Ser
			405					410						415	
Ser	Cys	Asn	Thr	Thr	Phe	Ala	Glu	Leu	Ser	Ser	Arg	Leu	Pro	Pro	Arg
		420						425					430		
Gly	Leu	Thr	Gln	Ala	Ala	Arg	Arg	Tyr	Gly	Ile	Gly	Leu	Asp	Tyr	Gln
		435					440					445			
Val	Asp	Gly	Ile	Thr	Thr	Val	Thr	Gly	Ser	Val	Pro	Pro	Thr	Val	Asp
	450					455					460				
Leu	Ala	Glu	Arg	Thr	Glu	Asp	Gly	Phe	Gly	Gln	Gly	Lys	Val	Leu	Ala
465				470						475					480
Ser	Pro	Phe	Gly	Met	Ala	Leu	Val	Ala	Ala	Thr	Val	Ala	Ala	Gly	Lys
			485					490						495	
Thr	Pro	Val	Pro	Gln	Leu	Ile	Ala	Gly	Arg	Pro	Thr	Ala	Val	Glu	Gly
		500						505					510		
Asp	Ala	Thr	Pro	Ile	Ser	Gln	Lys	Met	Ile	Asp	Ala	Leu	Arg	Pro	Met
	515					520						525			
Met	Arg	Leu	Val	Val	Thr	Asn	Gly	Thr	Ala	Lys	Glu	Ile	Ala	Gly	Cys
	530					535					540				
Gly	Glu	Val	Phe	Gly	Lys	Thr	Gly	Glu	Ala	Glu	Phe	Pro	Gly	Gly	Ser

545 550 555 560
 His Ser Trp Phe Ala Gly Tyr Arg Gly Asp Leu Ala Phe Ala Ser Leu
 565 570 575
 Ile Val Gly Gly Gly Ser Ser Glu Tyr Ala Val Arg Met Thr Lys Val
 580 585 590
 Met Phe Glu Ser Leu Pro Pro Gly Tyr Leu Ala
 595 600

<210> 256

<211> 387

<212> PRT

<213> Mycobacterium tuberculosis

<400> 256

Val Thr Val Gly Leu Gly Met Pro Gln Pro Pro Ala Pro Thr Leu Ala
 1 5 10 15
 Pro Arg Arg Ala Thr Arg Gln Leu Met Val Gly Asn Val Gly Val Gly
 20 25 30
 Ser Asp His Pro Val Ser Val Gln Ser Met Cys Thr Thr Lys Thr His
 35 40 45
 Asp Val Asn Ser Thr Leu Gln Gln Ile Ala Glu Leu Thr Ala Ala Gly
 50 55 60
 Cys Asp Ile Val Arg Val Ala Cys Pro Arg Gln Glu Asp Ala Asp Ala
 65 70 75 80
 Leu Ala Glu Ile Ala Arg His Ser Gln Ile Pro Val Val Ala Asp Ile
 85 90 95
 His Phe Gln Pro Arg Tyr Ile Phe Ala Ala Ile Asp Ala Gly Cys Ala
 100 105 110
 Ala Val Arg Val Asn Pro Gly Asn Ile Lys Glu Phe Asp Gly Arg Val
 115 120 125
 Gly Glu Val Ala Lys Ala Ala Gly Ala Ala Gly Ile Pro Ile Arg Ile
 130 135 140
 Gly Val Asn Ala Gly Ser Leu Asp Lys Arg Phe Met Glu Lys Tyr Gly
 145 150 155 160
 Lys Ala Thr Pro Glu Ala Leu Val Glu Ser Ala Leu Trp Glu Ala Ser
 165 170 175
 Leu Phe Glu Glu His Gly Phe Gly Asp Ile Lys Ile Ser Val Lys His
 180 185 190
 Asn Asp Pro Val Val Met Val Ala Ala Tyr Glu Leu Leu Ala Ala Arg
 195 200 205
 Cys Asp Tyr Pro Leu His Leu Gly Val Thr Glu Ala Gly Pro Ala Phe
 210 215 220
 Gln Gly Thr Ile Lys Ser Ala Val Ala Phe Gly Ala Leu Leu Ser Arg
 225 230 235 240
 Gly Ile Gly Asp Thr Ile Arg Val Ser Leu Ser Ala Pro Pro Val Glu
 245 250 255
 Glu Val Lys Val Gly Asn Gln Val Leu Glu Ser Leu Asn Leu Arg Pro
 260 265 270
 Arg Ser Leu Glu Ile Val Ser Cys Pro Ser Cys Gly Arg Ala Gln Val
 275 280 285
 Asp Val Tyr Thr Leu Ala Asn Glu Val Thr Ala Gly Leu Asp Gly Leu
 290 295 300
 Asp Val Pro Leu Arg Val Ala Val Met Gly Cys Val Val Asn Gly Pro
 305 310 315 320
 Gly Glu Ala Arg Glu Ala Asp Leu Gly Val Ala Ser Gly Asn Gly Lys
 325 330 335
 Gly Gln Ile Phe Val Arg Gly Glu Val Ile Lys Thr Val Pro Glu Ala

340 345 350
 Gln Ile Val Glu Thr Leu Ile Glu Glu Ala Met Arg Leu Ala Ala Glu
 355 360 365
 Met Gly Glu Gln Asp Pro Gly Ala Thr Pro Ser Gly Ser Pro Ile Val
 370 375 380
 Thr Val Ser
 385

<210> 257
 <211> 404
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 257
 Met Met Phe Val Thr Gly Ile Val Leu Phe Ala Leu Ala Ile Leu Ile
 1 5 10 15
 Ser Val Ala Leu His Glu Cys Gly His Met Trp Val Ala Arg Arg Thr
 20 25 30
 Gly Met Lys Val Arg Arg Tyr Phe Val Gly Phe Gly Pro Thr Leu Trp
 35 40 45
 Ser Thr Arg Arg Gly Glu Thr Glu Tyr Gly Val Lys Ala Val Pro Leu
 50 55 60
 Gly Gly Phe Cys Asp Ile Ala Gly Met Thr Pro Val Glu Glu Leu Asp
 65 70 75 80
 Pro Asp Glu Arg Asp Arg Ala Met Tyr Lys Gln Ala Thr Trp Lys Arg
 85 90 95
 Val Ala Val Leu Phe Ala Gly Pro Gly Met Asn Leu Ala Ile Cys Leu
 100 105 110
 Val Leu Ile Tyr Ala Ile Ala Leu Val Trp Gly Leu Pro Asn Leu His
 115 120 125
 Pro Pro Thr Arg Ala Val Ile Gly Glu Thr Gly Cys Val Ala Gln Glu
 130 135 140
 Val Ser Gln Gly Lys Leu Glu Gln Cys Thr Gly Pro Gly Pro Ala Ala
 145 150 155 160
 Leu Ala Gly Ile Arg Ser Gly Asp Val Val Val Lys Val Gly Asp Thr
 165 170 175
 Pro Val Ser Ser Phe Asp Glu Met Ala Ala Ala Val Arg Lys Ser His
 180 185 190
 Gly Ser Val Pro Ile Val Val Glu Arg Asp Gly Thr Ala Ile Val Thr
 195 200 205
 Tyr Val Asp Ile Glu Ser Thr Gln Arg Trp Ile Pro Asn Gly Gln Gly
 210 215 220
 Gly Glu Leu Gln Pro Ala Thr Val Gly Ala Ile Gly Val Gly Ala Ala
 225 230 235 240
 Arg Val Gly Pro Val Arg Tyr Gly Val Phe Ser Ala Met Pro Ala Thr
 245 250 255
 Phe Ala Val Thr Gly Asp Leu Thr Val Glu Val Gly Lys Ala Leu Ala
 260 265 270
 Ala Leu Pro Thr Lys Val Gly Ala Leu Val Arg Ala Ile Gly Gly Gly
 275 280 285
 Gln Arg Asp Pro Gln Thr Pro Ile Ser Val Val Gly Ala Ser Ile Ile
 290 295 300
 Gly Gly Asp Thr Val Asp His Gly Leu Trp Val Ala Phe Trp Phe Phe
 305 310 315 320
 Leu Ala Gln Leu Asn Leu Ile Leu Ala Ala Ile Asn Leu Leu Pro Leu
 325 330 335
 Leu Pro Phe Asp Gly Gly His Ile Ala Val Ala Val Phe Glu Arg Ile

			340				345				350					
Arg	Asn	Met	Val	Arg	Ser	Ala	Arg	Gly	Lys	Val	Ala	Ala	Ala	Pro	Val	
			355				360				365					
Asn	Tyr	Leu	Lys	Leu	Leu	Pro	Ala	Thr	Tyr	Val	Val	Leu	Val	Leu	Val	
			370				375				380					
Val	Gly	Tyr	Met	Leu	Leu	Thr	Val	Thr	Ala	Asp	Leu	Val	Asn	Pro	Ile	
			385				390				395				400	
Arg	Leu	Phe	Gln													

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<210> 258
<211> 436
<212> PRT
<213> Mycobacterium tuberculosis
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<400>	258														
Val	Ala	Thr	Gly	Gly	Arg	Val	Val	Ile	Arg	Arg	Arg	Gly	Asp	Asn	Glu
1				5					10					15	
Val	Val	Ala	His	Asn	Asp	Glu	Val	Thr	Asn	Ser	Thr	Asp	Gly	Arg	Ala
			20					25				30			
Asp	Gly	Arg	Leu	Arg	Val	Val	Val	Leu	Gly	Ser	Thr	Gly	Ser	Ile	Gly
		35					40					45			
Thr	Gln	Ala	Leu	Gln	Val	Ile	Ala	Asp	Asn	Pro	Asp	Arg	Phe	Glu	Val
	50					55				60					
Val	Gly	Leu	Ala	Ala	Gly	Gly	Ala	His	Leu	Asp	Thr	Leu	Leu	Arg	Gln
65					70					75					80
Arg	Ala	Gln	Thr	Gly	Val	Thr	Asn	Ile	Ala	Val	Ala	Asp	Glu	His	Ala
				85				90						95	
Ala	Gln	Arg	Val	Gly	Asp	Ile	Pro	Tyr	His	Gly	Ser	Asp	Ala	Ala	Thr
			100					105					110		
Arg	Leu	Val	Glu	Gln	Thr	Glu	Ala	Asp	Val	Val	Leu	Asn	Ala	Leu	Val
		115					120					125			
Gly	Ala	Leu	Gly	Leu	Arg	Pro	Thr	Leu	Ala	Ala	Leu	Lys	Thr	Gly	Ala
	130					135					140				
Arg	Leu	Ala	Leu	Ala	Asn	Lys	Glu	Ser	Leu	Val	Ala	Gly	Gly	Ser	Leu
145					150					155					160
Val	Leu	Arg	Ala	Ala	Arg	Pro	Gly	Gln	Ile	Val	Pro	Val	Asp	Ser	Glu
				165					170					175	
His	Ser	Ala	Leu	Ala	Gln	Cys	Leu	Arg	Gly	Gly	Thr	Pro	Asp	Glu	Val
			180					185					190		
Ala	Lys	Leu	Val	Leu	Thr	Ala	Ser	Gly	Gly	Pro	Phe	Arg	Gly	Trp	Ser
		195					200					205			
Ala	Ala	Asp	Leu	Glu	His	Val	Thr	Pro	Glu	Gln	Ala	Gly	Ala	His	Pro
	210					215					220				
Thr	Trp	Ser	Met	Gly	Pro	Met	Asn	Thr	Leu	Asn	Ser	Ala	Ser	Leu	Val
225					230					235					240
Asn	Lys	Gly	Leu	Glu	Val	Ile	Glu	Thr	His	Leu	Leu	Phe	Gly	Ile	Pro
				245					250					255	
Tyr	Asp	Arg	Ile	Asp	Val	Val	Val	His	Pro	Gln	Ser	Ile	Ile	His	Ser
			260					265					270		
Met	Val	Thr	Phe	Ile	Asp	Gly	Ser	Thr	Ile	Ala	Gln	Ala	Ser	Pro	Pro
		275					280					285			
Asp	Met	Lys	Leu	Pro	Ile	Ser	Leu	Ala	Leu	Gly	Trp	Pro	Arg	Arg	Val
	290					295					300				
Ser	Gly	Ala	Ala	Ala	Ala	Cys	Asp	Phe	His	Thr	Ala	Ser	Ser	Trp	Glu
305					310					315					320
Phe	Glu	Pro	Leu	Asp	Thr	Asp	Val	Phe	Pro	Ala	Val	Glu	Leu	Ala	Arg

<213> Mycobacterium tuberculosis

Val 1	Gly	Ala	Gly	Ser 5	Arg	Phe	Pro	Leu	Val 10	Asp	Pro	Leu	Pro	Ser 15	Val
Gly	Ala	Arg	Pro 20	Asp	Arg	Leu	Arg	Gly 25	Gln	Pro	Arg	Arg	Arg	Thr	Arg
Ala	Gly	Gly	Arg	Pro	Gly	Ser	Ala 40	Arg	Cys	Val	Pro	Glu	Ala	Ala	Ala
Ala	Ala	Ala	Gly 35	Arg	His	Asp 55	Thr	Gly	Pro	Arg	Arg	Gln	Ser	Arg	Arg
Arg 65	Leu	Val	Ala	Val	Asp 70	Gly	Ala	Asp	His	Arg 75	Val	Gln	Arg	Ala	Val 80
Ile	Trp	Pro	Leu	Val 85	Tyr	Leu	Lys	Ser	Leu 90	Thr	Leu	Lys	Gly	Phe	Lys
Ser	Phe	Ala	Ala 100	Pro	Thr	Thr	Leu	Arg	Phe	Glu	Pro	Gly	Ile	Thr	Ala
Val	Val	Gly	Pro 115	Asn	Gly	Ser	Gly	Lys	Ser	Asn	Val	Val	Asp	Ala	Leu
Ala	Trp	Val	Met 130	Gly	Glu	Gln	Gly	Ala	Lys	Thr	Leu	Arg	Gly	Gly	Lys
Met 145	Glu	Asp	Val	Ile	Phe	Ala	Gly	Thr	Ser	Ser 155	Arg	Ala	Pro	Leu	Gly 160
Arg	Ala	Glu	Val 165	Thr	Val	Ser	Ile	Asp	Asn 170	Ser	Asp	Asn	Ala	Leu	Pro
Ile	Glu	Tyr	Thr 180	Glu	Val	Ser	Ile	Thr	Arg 185	Arg	Met	Phe	Arg	Asp	Gly
Ala	Ser	Glu	Tyr 195	Glu	Ile	Asn	Gly	Ser	Ser	Cys	Arg	Leu	Met	Asp	Val
Gln	Glu	Leu	Leu 210	Ser	Asp	Ser	Gly	Ile	Gly	Arg	Glu	Met	His	Val	Ile
Val 225	Gly	Gln	Gly	Lys	Leu	Glu	Glu	Ile	Leu	Gln 235	Ser	Arg	Pro	Glu	Asp 240
Arg	Arg	Ala	Phe 245	Ile	Glu	Glu	Ala	Ala	Gly 250	Val	Leu	Lys	His	Arg	Lys
Arg	Lys	Glu	Lys 260	Ala	Leu	Arg	Lys	Leu	Asp 265	Thr	Met	Ala	Ala	Asn	Leu
Ala	Arg	Leu	Thr 270	Asp	Leu	Thr	Thr	Glu	Leu	Arg	Arg	Gln	Leu	Lys	Pro

275	280	285
Leu Gly Arg Gln Ala Glu Ala Gln Arg Ala Ala Ala Ile Gln Ala		
290	295	300
Asp Leu Arg Asp Ala Arg Leu Arg Leu Ala Ala Asp Asp Leu Val Ser		
305	310	315
Arg Arg Ala Glu Arg Glu Ala Val Phe Gln Ala Glu Ala Ala Met Arg		
325	330	335
Arg Glu His Asp Glu Ala Ala Ala Arg Leu Ala Val Ala Ser Glu Glu		
340	345	350
Leu Ala Ala His Glu Ser Ala Val Ala Glu Leu Ser Thr Arg Ala Glu		
355	360	365
Ser Ile Gln His Thr Trp Phe Gly Leu Ser Ala Leu Ala Glu Arg Val		
370	375	380
Asp Ala Thr Val Arg Ile Ala Ser Glu Arg Ala His His Leu Asp Ile		
385	390	395
Glu Pro Val Ala Val Ser Asp Thr Asp Pro Arg Lys Pro Glu Glu Leu		
405	410	415
Glu Ala Glu Ala Gln Gln Val Ala Val Ala Glu Gln Gln Leu Leu Ala		
420	425	430
Glu Leu Asp Ala Ala Arg Ala Arg Leu Asp Ala Ala Arg Ala Glu Leu		
435	440	445
Ala Asp Arg Glu Arg Arg Ala Ala Glu Ala Asp Arg Ala His Leu Ala		
450	455	460
Ala Val Arg Glu Glu Ala Asp Arg Arg Glu Gly Leu Ala Arg Leu Ala		
465	470	475
Gly Gln Val Glu Thr Met Arg Ala Arg Val Glu Ser Ile Asp Glu Ser		
485	490	495
Val Ala Arg Leu Ser Glu Arg Ile Glu Asp Ala Ala Met Arg Ala Gln		
500	505	510
Gln Thr Arg Ala Glu Phe Glu Thr Val Gln Gly Arg Ile Gly Glu Leu		
515	520	525
Asp Gln Gly Glu Val Gly Leu Asp Glu His His Glu Arg Thr Val Ala		
530	535	540
Ala Leu Arg Leu Ala Asp Glu Arg Val Ala Glu Leu Gln Ser Ala Glu		
545	550	555
Arg Ala Ala Glu Arg Gln Val Ala Ser Leu Arg Ala Arg Ile Asp Ala		
565	570	575
Leu Ala Val Gly Leu Gln Arg Lys Asp Gly Ala Ala Trp Leu Ala His		
580	585	590
Asn Arg Ser Gly Ala Gly Leu Phe Gly Ser Ile Ala Gln Leu Val Lys		
595	600	605
Val Arg Ser Gly Tyr Glu Ala Ala Leu Ala Ala Ala Leu Gly Pro Ala		
610	615	620
Ala Asp Ala Leu Ala Val Asp Gly Leu Thr Ala Ala Gly Ser Ala Val		
625	630	635
Ser Ala Leu Lys Gln Ala Asp Gly Gly Arg Ala Val Leu Val Leu Ser		
645	650	655
Asp Trp Pro Ala Pro Gln Ala Pro Gln Ser Ala Ser Gly Glu Met Leu		
660	665	670
Pro Ser Gly Ala Gln Trp Ala Leu Asp Leu Val Glu Ser Pro Pro Gln		
675	680	685
Leu Val Gly Ala Met Ile Ala Met Leu Ser Gly Val Ala Val Val Asn		
690	695	700
Asp Leu Thr Glu Ala Met Gly Leu Val Glu Ile Arg Pro Glu Leu Arg		
705	710	715
Ala Val Thr Val Asp Gly Asp Leu Val Gly Ala Gly Trp Val Ser Gly		
725	730	735

Gly	Ser	Asp	Arg	Lys	Leu	Ser	Thr	Leu	Glu	Val	Thr	Ser	Glu	Ile	Asp	740	745	750
Lys	Ala	Arg	Ser	Glu	Leu	Ala	Ala	Ala	Glu	Ala	Leu	Ala	Ala	Gln	Leu	755	760	765
Asn	Ala	Ala	Leu	Ala	Gly	Ala	Leu	Thr	Glu	Gln	Ser	Ala	Arg	Gln	Asp	770	775	780
Ala	Ala	Glu	Gln	Ala	Leu	Ala	Ala	Leu	Asn	Glu	Ser	Asp	Thr	Ala	Ile	785	790	795
Ser	Ala	Met	Tyr	Glu	Gln	Leu	Gly	Arg	Leu	Gly	Gln	Glu	Ala	Arg	Ala	805	810	815
Ala	Glu	Glu	Glu	Trp	Asn	Arg	Leu	Leu	Gln	Gln	Arg	Thr	Glu	Gln	Glu	820	825	830
Ala	Val	Arg	Thr	Gln	Thr	Leu	Asp	Asp	Val	Ile	Gln	Leu	Glu	Thr	Gln	835	840	845
Leu	Arg	Lys	Ala	Gln	Glu	Thr	Gln	Arg	Val	Gln	Val	Ala	Gln	Pro	Ile	850	855	860
Asp	Arg	Gln	Ala	Ile	Ser	Ala	Ala	Ala	Asp	Arg	Ala	Arg	Gly	Val	Glu	865	870	875
Val	Glu	Ala	Arg	Leu	Ala	Val	Arg	Thr	Ala	Glu	Glu	Arg	Ala	Asn	Ala	885	890	895
Val	Arg	Gly	Arg	Ala	Asp	Ser	Leu	Arg	Arg	Ala	Ala	Ala	Ala	Glu	Arg	900	905	910
Glu	Ala	Arg	Val	Arg	Ala	Gln	Gln	Ala	Arg	Ala	Ala	Arg	Leu	His	Ala	915	920	925
Ala	Ala	Val	Ala	Ala	Ala	Val	Ala	Asp	Cys	Gly	Arg	Leu	Leu	Ala	Gly	930	935	940
Arg	Leu	His	Arg	Ala	Val	Asp	Gly	Ala	Ser	Gln	Leu	Arg	Asp	Ala	Ser	945	950	955
Ala	Ala	Gln	Arg	Gln	Gln	Arg	Leu	Ala	Ala	Met	Ala	Ala	Val	Arg	Asp	965	970	975
Glu	Val	Asn	Thr	Leu	Ser	Ala	Arg	Val	Gly	Glu	Leu	Thr	Asp	Ser	Leu	980	985	990
His	Arg	Asp	Glu	Leu	Ala	Asn	Ala	Gln	Ala	Ala	Leu	Arg	Ile	Glu	Gln	995	1000	1005
Leu	Glu	Gln	Met	Val	Leu	Glu	Gln	Phe	Gly	Met	Ala	Pro	Ala	Asp	Leu	1010	1015	1020
Ile	Thr	Glu	Tyr	Gly	Pro	His	Val	Ala	Leu	Pro	Pro	Thr	Glu	Leu	Glu	1025	1030	1035
Met	Ala	Glu	Phe	Glu	Gln	Ala	Arg	Glu	Arg	Gly	Glu	Gln	Val	Ile	Ala	1045	1050	1055
Pro	Ala	Pro	Met	Pro	Phe	Asp	Arg	Val	Thr	Gln	Glu	Arg	Arg	Ala	Lys	1060	1065	1070
Arg	Ala	Glu	Arg	Ala	Leu	Ala	Glu	Leu	Gly	Arg	Val	Asn	Pro	Leu	Ala	1075	1080	1085
Leu	Glu	Glu	Phe	Ala	Ala	Leu	Glu	Glu	Arg	Tyr	Asn	Phe	Leu	Ser	Thr	1090	1095	1100
Gln	Leu	Glu	Asp	Val	Lys	Ala	Ala	Arg	Lys	Asp	Leu	Leu	Gly	Val	Val	1105	1110	1115
Ala	Asp	Val	Asp	Ala	Arg	Ile	Leu	Gln	Val	Phe	Asn	Asp	Ala	Phe	Val	1125	1130	1135
Asp	Val	Glu	Arg	Glu	Phe	Arg	Gly	Val	Phe	Thr	Ala	Leu	Phe	Pro	Gly	1140	1145	1150
Gly	Glu	Gly	Arg	Leu	Arg	Leu	Thr	Glu	Pro	Asp	Asp	Met	Leu	Thr	Thr	1155	1160	1165
Gly	Ile	Glu	Val	Glu	Ala	Arg	Pro	Pro	Gly	Lys	Lys	Ile	Thr	Arg	Leu	1170	1175	1180
Ser	Leu	Leu	Ser	Gly	Gly	Glu	Lys	Ala	Leu	Thr	Ala	Val	Ala	Met	Leu			

1185		1190		1195		1200									
Val	Ala	Ile	Phe	Arg	Ala	Arg	Pro	Ser	Pro	Phe	Tyr	Ile	Met	Asp	Glu
				1205					1210					1215	
Val	Glu	Ala	Ala	Leu	Asp	Asp	Val	Asn	Leu	Arg	Arg	Leu	Leu	Ser	Leu
			1220					1225						1230	
Phe	Glu	Gln	Leu	Arg	Glu	Gln	Ser	Gln	Ile	Ile	Ile	Ile	Thr	His	Gln
		1235					1240						1245		
Lys	Pro	Thr	Met	Glu	Val	Ala	Asp	Ala	Leu	Tyr	Gly	Val	Thr	Met	Gln
	1250					1255					1260				
Asn	Asp	Gly	Ile	Thr	Ala	Val	Ile	Ser	Gln	Arg	Met	Arg	Gly	Gln	Gln
1265				1270					1275					1280	
Val	Asp	Gln	Leu	Val	Thr	Asn	Ser	Ser							
				1285											

<210> 260
 <211> 240
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 260
Met Ile Arg Ser Arg Gln Pro Leu Leu Asp Ala Leu Gly Val Asp Leu
1 5 10 15
Pro Asp Glu Leu Leu Ser Leu Ala Leu Thr His Arg Ser Tyr Ala Tyr
20 25 30
Glu Asn Gly Gly Leu Pro Thr Asn Glu Arg Leu Glu Phe Leu Gly Asp
35 40 45
Ala Val Leu Gly Leu Thr Ile Thr Asp Ala Leu Phe His Arg His Pro
50 55 60
Asp Arg Ser Glu Gly Asp Leu Ala Lys Leu Arg Ala Ser Val Val Asn
65 70 75 80
Thr Gln Ala Leu Ala Asp Val Ala Arg Arg Leu Cys Ala Glu Gly Leu
85 90 95
Gly Val His Val Leu Leu Gly Arg Gly Glu Ala Asn Thr Gly Gly Ala
100 105 110
Asp Lys Ser Ser Ile Leu Ala Asp Gly Met Glu Ser Leu Leu Gly Ala
115 120 125
Ile Tyr Leu Gln His Gly Met Glu Lys Ala Arg Glu Val Ile Leu Arg
130 135 140
Leu Phe Gly Pro Leu Leu Asp Ala Ala Pro Thr Leu Gly Ala Gly Leu
145 150 155 160
Asp Trp Lys Thr Ser Leu Gln Glu Leu Thr Ala Ala Arg Gly Leu Gly
165 170 175
Ala Pro Ser Tyr Leu Val Thr Ser Thr Gly Pro Asp His Asp Lys Glu
180 185 190
Phe Thr Ala Val Val Val Val Met Asp Ser Glu Tyr Gly Ser Gly Val
195 200 205
Gly Arg Ser Lys Lys Glu Ala Glu Gln Lys Ala Ala Ala Ala Ala Trp
210 215 220
Lys Ala Leu Glu Val Leu Asp Asn Ala Met Pro Gly Lys Thr Ser Ala
225 230 235 240

<210> 261
 <211> 1827
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 261

Met	Thr	Ser	Leu	Ala	Glu	Arg	Ala	Ala	Gln	Leu	Ser	Pro	Asn	Ala	Arg	1	5	10	15
Ala	Ala	Leu	Ala	Arg	Glu	Leu	Val	Arg	Ala	Gly	Thr	Thr	Phe	Pro	Thr	20	25	30	
Asp	Ile	Cys	Glu	Pro	Val	Ala	Val	Val	Gly	Ile	Gly	Cys	Arg	Phe	Pro	35	40	45	
Gly	Asn	Val	Thr	Gly	Pro	Glu	Ser	Phe	Trp	Gln	Leu	Leu	Ala	Asp	Gly	50	55	60	
Val	Asp	Thr	Ile	Glu	Gln	Val	Pro	Pro	Asp	Arg	Trp	Asp	Ala	Asp	Ala	65	70	75	80
Phe	Tyr	Asp	Pro	Asp	Pro	Ser	Ala	Ser	Gly	Arg	Met	Thr	Thr	Lys	Trp	85	90	95	
Gly	Gly	Phe	Val	Ser	Asp	Val	Asp	Ala	Phe	Asp	Ala	Asp	Phe	Phe	Gly	100	105	110	
Ile	Thr	Pro	Arg	Glu	Ala	Val	Ala	Met	Asp	Pro	Gln	His	Arg	Met	Leu	115	120	125	
Leu	Glu	Val	Ala	Trp	Glu	Ala	Leu	Glu	His	Ala	Gly	Ile	Pro	Pro	Asp	130	135	140	
Ser	Leu	Ser	Gly	Thr	Arg	Thr	Gly	Val	Met	Met	Gly	Leu	Ser	Ser	Trp	145	150	155	160
Asp	Tyr	Thr	Ile	Val	Asn	Ile	Glu	Arg	Arg	Ala	Asp	Ile	Asp	Ala	Tyr	165	170	175	
Leu	Ser	Thr	Gly	Thr	Pro	His	Cys	Ala	Ala	Val	Gly	Arg	Ile	Ala	Tyr	180	185	190	
Leu	Leu	Gly	Leu	Arg	Gly	Pro	Ala	Val	Ala	Val	Asp	Thr	Ala	Cys	Ser	195	200	205	
Ser	Ser	Leu	Val	Ala	Ile	His	Leu	Ala	Cys	Gln	Ser	Leu	Arg	Leu	Arg	210	215	220	
Glu	Thr	Asp	Val	Ala	Leu	Ala	Gly	Gly	Val	Gln	Leu	Thr	Leu	Ser	Pro	225	230	235	240
Phe	Thr	Ala	Ile	Ala	Leu	Ser	Lys	Trp	Ser	Ala	Leu	Ser	Pro	Thr	Gly	245	250	255	
Arg	Cys	Asn	Ser	Phe	Asp	Ala	Asn	Ala	Asp	Gly	Phe	Val	Arg	Gly	Glu	260	265	270	
Gly	Cys	Gly	Val	Val	Val	Leu	Lys	Arg	Leu	Ala	Asp	Ala	Val	Arg	Asp	275	280	285	
Gln	Asp	Arg	Val	Leu	Ala	Val	Val	Arg	Gly	Ser	Ala	Thr	Asn	Ser	Asp	290	295	300	
Gly	Arg	Ser	Asn	Gly	Met	Thr	Ala	Pro	Asn	Ala	Leu	Ala	Gln	Arg	Asp	305	310	315	320
Val	Ile	Thr	Ser	Ala	Leu	Lys	Leu	Ala	Asp	Val	Thr	Pro	Asp	Ser	Val	325	330	335	
Asn	Tyr	Val	Glu	Thr	His	Gly	Thr	Gly	Thr	Val	Leu	Gly	Asp	Pro	Ile	340	345	350	
Glu	Phe	Glu	Ser	Leu	Ala	Ala	Thr	Tyr	Gly	Leu	Gly	Lys	Gly	Gln	Gly	355	360	365	
Glu	Ser	Pro	Cys	Ala	Leu	Gly	Ser	Val	Lys	Thr	Asn	Ile	Gly	His	Leu	370	375	380	
Glu	Ala	Ala	Ala	Gly	Val	Ala	Gly	Phe	Ile	Lys	Ala	Val	Leu	Ala	Val	385	390	395	400
Gln	Arg	Gly	His	Ile	Pro	Arg	Asn	Leu	His	Phe	Thr	Arg	Trp	Asn	Pro	405	410	415	
Ala	Ile	Asp	Ala	Ser	Ala	Thr	Arg	Leu	Phe	Val	Pro	Thr	Glu	Ser	Ala	420	425	430	
Pro	Trp	Pro	Ala	Ala	Ala	Gly	Pro	Arg	Arg	Ala	Ala	Val	Ser	Ser	Phe	435	440	445	
Gly	Leu	Ser	Gly	Thr	Asn	Ala	His	Val	Val	Val	Glu	Gln	Ala	Pro	Asp				

450		455		460											
Thr	Ala	Val	Ala	Ala	Ala	Gly	Gly	Met	Pro	Tyr	Val	Ser	Ala	Leu	Asn
465				470						475					480
Val	Ser	Gly	Lys	Thr	Ala	Ala	Arg	Val	Ala	Ser	Ala	Ala	Ala	Val	Leu
				485						490					495
Ala	Asp	Trp	Met	Ser	Gly	Pro	Gly	Ala	Ala	Ala	Pro	Leu	Ala	Asp	Val
			500					505					510		
Ala	His	Thr	Leu	Asn	Arg	His	Arg	Ala	Arg	His	Ala	Lys	Phe	Ala	Thr
			515					520					525		
Val	Ile	Ala	Arg	Asp	Arg	Ala	Glu	Ala	Ile	Ala	Gly	Leu	Arg	Ala	Leu
			530					535					540		
Ala	Ala	Gly	Gln	Pro	Arg	Val	Gly	Val	Val	Asp	Cys	Asp	Gln	His	Ala
545					550					555					560
Gly	Gly	Pro	Gly	Arg	Val	Phe	Val	Tyr	Ser	Gly	Gln	Gly	Ser	Gln	Trp
				565						570					575
Ala	Ser	Met	Gly	Gln	Gln	Leu	Leu	Ala	Asn	Glu	Pro	Ala	Phe	Ala	Lys
			580					585					590		
Ala	Val	Ala	Glu	Leu	Asp	Pro	Ile	Phe	Val	Asp	Gln	Val	Gly	Phe	Ser
			595					600					605		
Leu	Gln	Gln	Thr	Leu	Ile	Asp	Gly	Asp	Glu	Val	Val	Gly	Ile	Asp	Arg
			610					615					620		
Ile	Gln	Pro	Val	Leu	Val	Gly	Met	Gln	Leu	Ala	Leu	Thr	Glu	Leu	Trp
625					630					635					640
Arg	Ser	Tyr	Gly	Val	Ile	Pro	Asp	Ala	Val	Ile	Gly	His	Ser	Met	Gly
				645						650					655
Glu	Val	Ser	Ala	Ala	Val	Val	Ala	Gly	Ala	Leu	Thr	Pro	Glu	Gln	Gly
			660					665					670		
Leu	Arg	Val	Ile	Thr	Thr	Arg	Ser	Arg	Leu	Met	Ala	Arg	Leu	Ser	Gly
			675					680					685		
Gln	Gly	Ala	Met	Ala	Leu	Leu	Glu	Leu	Asp	Ala	Asp	Ala	Ala	Glu	Ala
			690					695					700		
Leu	Ile	Ala	Gly	Tyr	Pro	Gln	Val	Thr	Leu	Ala	Val	His	Ala	Ser	Pro
705					710					715					720
Arg	Gln	Thr	Val	Ile	Ala	Gly	Pro	Pro	Glu	Gln	Val	Asp	Thr	Val	Ile
				725						730					735
Ala	Ala	Val	Ala	Thr	Gln	Asn	Arg	Leu	Ala	Arg	Arg	Val	Glu	Val	Asp
			740					745					750		
Val	Ala	Ser	His	His	Pro	Ile	Ile	Asp	Pro	Ile	Leu	Pro	Glu	Leu	Arg
			755					760					765		
Ser	Ala	Leu	Ala	Asp	Leu	Thr	Pro	Gln	Pro	Pro	Ser	Ile	Pro	Ile	Ile
			770					775					780		
Ser	Thr	Thr	Tyr	Glu	Ser	Ala	Gln	Pro	Val	Ala	Asp	Ala	Asp	Tyr	Trp
785					790					795					800
Ser	Ala	Asn	Leu	Arg	Asn	Pro	Val	Arg	Phe	His	Gln	Ala	Val	Thr	Ala
				805					810						815
Ala	Gly	Val	Asp	His	Asn	Thr	Phe	Ile	Glu	Ile	Ser	Pro	His	Pro	Val
			820					825					830		
Leu	Thr	His	Ala	Leu	Thr	Asp	Thr	Leu	Asp	Pro	Asp	Gly	Ser	His	Thr
			835					840					845		
Val	Met	Ser	Thr	Met	Asn	Arg	Glu	Leu	Asp	Gln	Thr	Leu	Tyr	Phe	His
			850					855					860		
Ala	Gln	Leu	Ala	Ala	Val	Gly	Val	Ala	Ala	Ser	Glu	His	Thr	Thr	Gly
865					870					875					880
Arg	Leu	Val	Asp	Leu	Pro	Pro	Thr	Pro	Trp	His	His	Gln	Arg	Phe	Trp
				885					890						895
Val	Thr	Asp	Arg	Ser	Ala	Met	Ser	Glu	Leu	Ala	Ala	Thr	His	Pro	Leu
			900					905							910

Leu Gly Ala His Ile Glu Met Pro Arg Asn Gly Asp His Val Trp Gln
 915 920 925
 Thr Asp Val Gly Thr Glu Val Cys Pro Trp Leu Ala Asp His Lys Val
 930 935 940
 Phe Gly Gln Pro Ile Met Pro Ala Ala Gly Phe Ala Glu Ile Ala Leu
 945 950 955 960
 Ala Ala Ala Ser Glu Ala Leu Gly Thr Ala Ala Asp Ala Val Ala Pro
 965 970 975
 Asn Ile Val Ile Asn Gln Phe Glu Val Glu Gln Met Leu Pro Leu Asp
 980 985 990
 Gly His Thr Pro Leu Thr Thr Gln Leu Ile Arg Gly Gly Asp Ser Gln
 995 1000 1005
 Ile Arg Val Glu Ile Tyr Ser Arg Thr Arg Gly Gly Glu Phe Cys Arg
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 His Ala Thr Ala Lys Val Glu Gln Ser Pro Arg Glu Cys Ala His Ala
 1025 1030 1035 1040
 His Pro Glu Ala Gln Gly Pro Ala Thr Gly Thr Thr Val Ser Pro Ala
 1045 1050 1055
 Asp Phe Tyr Ala Leu Leu Arg Gln Thr Gly Gln His His Gly Pro Ala
 1060 1065 1070
 Phe Ala Ala Leu Ser Arg Ile Val Arg Leu Ala Asp Gly Ser Ala Glu
 1075 1080 1085
 Thr Glu Ile Ser Ile Pro Asp Glu Ala Pro Arg His Pro Gly Tyr Arg
 1090 1095 1100
 Leu His Pro Val Val Leu Asp Ala Ala Leu Gln Ser Val Gly Ala Ala
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 Ile Pro Asp Gly Glu Ile Ala Gly Ser Ala Glu Ala Ser Tyr Leu Pro
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 Val Ser Phe Glu Thr Ile Arg Val Tyr Arg Asp Ile Gly Arg His Val
 1140 1145 1150
 Arg Cys Arg Ala His Leu Thr Asn Leu Asp Gly Gly Thr Gly Lys Met
 1155 1160 1165
 Gly Arg Ile Val Leu Ile Asn Asp Ala Gly His Ile Ala Ala Glu Val
 1170 1175 1180
 Asp Gly Ile Tyr Leu Arg Arg Val Glu Arg Arg Ala Val Pro Leu Pro
 1185 1190 1195 1200
 Leu Glu Gln Lys Ile Phe Asp Ala Glu Trp Thr Glu Ser Pro Ile Ala
 1205 1210 1215
 Ala Val Pro Ala Pro Glu Pro Ala Ala Glu Thr Thr Arg Gly Ser Trp
 1220 1225 1230
 Leu Val Leu Ala Asp Ala Thr Val Asp Ala Pro Gly Lys Ala Gln Ala
 1235 1240 1245
 Lys Ser Met Ala Asp Asp Phe Val Gln Gln Trp Arg Ser Pro Met Arg
 1250 1255 1260
 Arg Val His Thr Ala Asp Ile His Asp Glu Ser Ala Val Leu Ala Ala
 1265 1270 1275 1280
 Phe Ala Glu Thr Ala Gly Asp Pro Glu His Pro Pro Val Gly Val Val
 1285 1290 1295
 Val Phe Val Gly Gly Ala Ser Ser Arg Leu Asp Asp Glu Leu Ala Ala
 1300 1305 1310
 Ala Arg Asp Thr Val Trp Ser Ile Thr Thr Val Val Arg Ala Val Val
 1315 1320 1325
 Gly Thr Trp His Gly Arg Ser Pro Arg Leu Trp Leu Val Thr Gly Gly
 1330 1335 1340
 Gly Leu Ser Val Ala Asp Asp Glu Pro Gly Thr Pro Ala Ala Ala Ser
 1345 1350 1355 1360
 Leu Lys Gly Leu Val Arg Val Leu Ala Phe Glu His Pro Asp Met Arg

				1365				1370				1375			
Thr	Thr	Leu	Val	Asp	Leu	Asp	Ile	Thr	Gln	Asp	Pro	Leu	Thr	Ala	Leu
			1380					1385				1390			
Ser	Ala	Glu	Leu	Arg	Asn	Ala	Gly	Ser	Gly	Ser	Arg	His	Asp	Asp	Val
		1395					1400					1405			
Ile	Ala	Trp	Arg	Gly	Glu	Arg	Arg	Phe	Val	Glu	Arg	Leu	Ser	Arg	Ala
	1410					1415					1420				
Thr	Ile	Asp	Val	Ser	Lys	Gly	His	Pro	Val	Val	Arg	Gln	Gly	Ala	Ser
1425					1430					1435					1440
Tyr	Val	Val	Thr	Gly	Gly	Leu	Gly	Gly	Leu	Gly	Leu	Val	Val	Ala	Arg
			1445						1450					1455	
Trp	Leu	Val	Asp	Arg	Gly	Ala	Gly	Arg	Val	Val	Leu	Gly	Gly	Arg	Ser
		1460						1465				1470			
Asp	Pro	Thr	Asp	Glu	Gln	Cys	Asn	Val	Leu	Ala	Glu	Leu	Gln	Thr	Arg
		1475					1480					1485			
Ala	Glu	Ile	Val	Val	Val	Arg	Gly	Asp	Val	Ala	Ser	Pro	Gly	Val	Ala
	1490					1495					1500				
Glu	Lys	Leu	Ile	Glu	Thr	Ala	Arg	Gln	Ser	Gly	Gly	Gln	Leu	Arg	Gly
1505					1510					1515					1520
Val	Val	His	Ala	Ala	Ala	Val	Ile	Glu	Asp	Ser	Leu	Val	Phe	Ser	Met
			1525						1530					1535	
Ser	Arg	Asp	Asn	Leu	Glu	Arg	Val	Trp	Ala	Pro	Lys	Ala	Thr	Gly	Ala
		1540						1545					1550		
Leu	Arg	Met	His	Glu	Ala	Thr	Ala	Asp	Cys	Glu	Leu	Asp	Trp	Trp	Leu
		1555					1560					1565			
Gly	Phe	Ser	Ser	Ala	Ala	Ser	Leu	Leu	Gly	Ser	Pro	Gly	Gln	Ala	Ala
	1570					1575					1580				
Tyr	Ala	Cys	Ala	Ser	Ala	Trp	Leu	Asp	Ala	Leu	Val	Gly	Trp	Arg	Arg
1585					1590					1595					1600
Ala	Ser	Gly	Leu	Pro	Ala	Ala	Val	Ile	Asn	Trp	Gly	Pro	Trp	Ser	Glu
			1605						1610					1615	
Val	Gly	Val	Ala	Gln	Ala	Leu	Val	Gly	Ser	Val	Leu	Asp	Thr	Ile	Ser
		1620						1625					1630		
Val	Ala	Glu	Gly	Ile	Glu	Ala	Leu	Asp	Ser	Leu	Leu	Ala	Ala	Asp	Arg
	1635						1640					1645			
Ile	Arg	Thr	Gly	Val	Ala	Arg	Leu	Arg	Ala	Asp	Arg	Ala	Leu	Val	Ala
	1650					1655					1660				
Phe	Pro	Glu	Ile	Arg	Ser	Ile	Ser	Tyr	Phe	Thr	Gln	Val	Val	Glu	Glu
1665					1670					1675					1680
Leu	Asp	Ser	Ala	Gly	Asp	Leu	Gly	Asp	Trp	Gly	Gly	Pro	Asp	Ala	Leu
			1685						1690					1695	
Ala	Asp	Leu	Asp	Pro	Gly	Glu	Ala	Arg	Arg	Ala	Val	Thr	Glu	Arg	Met
		1700						1705					1710		
Cys	Ala	Arg	Ile	Ala	Ala	Val	Met	Gly	Tyr	Thr	Asp	Gln	Ser	Thr	Val
		1715					1720					1725			
Glu	Pro	Ala	Val	Pro	Leu	Asp	Lys	Pro	Leu	Thr	Glu	Leu	Gly	Leu	Asp
	1730					1735					1740				
Ser	Leu	Met	Ala	Val	Arg	Ile	Arg	Asn	Gly	Ala	Arg	Ala	Asp	Phe	Gly
1745					1750					1755					1760
Val	Glu	Pro	Pro	Val	Ala	Leu	Ile	Leu	Gln	Gly	Ala	Ser	Leu	His	Asp
			1765						1770					1775	
Leu	Thr	Ala	Asp	Leu	Met	Arg	Gln	Leu	Gly	Leu	Asn	Asp	Pro	Asp	Pro
		1780						1785					1790		
Ala	Leu	Asn	Asn	Ala	Asp	Thr	Ile	Arg	Asp	Arg	Ala	Arg	Gln	Arg	Ala
		1795					1800						1805		
Ala	Ala	Arg	His	Gly	Ala	Ala	Met	Arg	Arg	Arg	Pro	Lys	Pro	Glu	Val
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Gln Gly Gly
1825

<210> 262

<211> 1616

<212> PRT

<213> Mycobacterium tuberculosis

<400> 262

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Leu	Met	Ala	His	Val	Gln	Ala	Asn	Pro	Gly	Leu	Asp	Pro	Ile	Asp	Val
			20					25					30		
Gly	Cys	Ser	Leu	Ala	Ser	Arg	Ser	Val	Phe	Glu	His	Arg	Ala	Val	Val
		35					40					45			
Val	Gly	Ala	Ser	Arg	Glu	Gln	Leu	Ile	Ala	Gly	Leu	Ala	Gly	Leu	Ala
	50					55					60				
Ala	Gly	Glu	Pro	Gly	Ala	Gly	Val	Ala	Val	Gly	Gln	Pro	Gly	Ser	Val
65					70					75					80
Gly	Lys	Thr	Val	Val	Val	Phe	Pro	Gly	Gln	Gly	Ala	Gln	Arg	Ile	Gly
			85						90					95	
Met	Gly	Arg	Glu	Leu	Tyr	Gly	Glu	Leu	Pro	Val	Phe	Ala	Gln	Ala	Phe
			100					105					110		
Asp	Ala	Val	Ala	Asp	Glu	Leu	Asp	Arg	His	Leu	Arg	Leu	Pro	Leu	Arg
		115					120					125			
Asp	Val	Ile	Trp	Gly	Ala	Asp	Ala	Asp	Leu	Leu	Asp	Ser	Thr	Glu	Phe
	130					135					140				
Ala	Gln	Pro	Ala	Leu	Phe	Ala	Val	Glu	Val	Ala	Ser	Phe	Ala	Val	Leu
145					150					155					160
Arg	Asp	Trp	Gly	Val	Leu	Pro	Asp	Phe	Val	Met	Gly	His	Ser	Val	Gly
			165					170						175	
Glu	Leu	Ala	Ala	Ala	His	Ala	Ala	Gly	Val	Leu	Thr	Leu	Ala	Asp	Ala
		180						185					190		
Ala	Met	Leu	Val	Val	Ala	Arg	Gly	Arg	Leu	Met	Gln	Ala	Leu	Pro	Ala
	195						200					205			
Gly	Gly	Ala	Met	Val	Ala	Val	Ala	Ala	Ser	Glu	Asp	Glu	Val	Glu	Pro
	210					215					220				
Leu	Leu	Gly	Glu	Gly	Val	Gly	Ile	Ala	Ala	Ile	Asn	Ala	Pro	Glu	Ser
225					230					235				240	
Val	Val	Ile	Ser	Gly	Ala	Gln	Ala	Ala	Ala	Asn	Ala	Ile	Ala	Asp	Arg
				245					250					255	
Phe	Ala	Ala	Gln	Gly	Arg	Arg	Val	His	Gln	Leu	Ala	Val	Ser	His	Ala
			260					265					270		
Phe	His	Ser	Pro	Leu	Met	Glu	Pro	Met	Leu	Glu	Glu	Phe	Ala	Arg	Val
		275					280					285			
Ala	Ala	Arg	Val	Gln	Ala	Arg	Glu	Pro	Gln	Leu	Gly	Leu	Val	Ser	Asn
	290					295					300				
Val	Thr	Gly	Glu	Leu	Ala	Gly	Pro	Asp	Phe	Gly	Ser	Ala	Gln	Tyr	Trp
305					310					315					320
Val	Asp	His	Val	Arg	Arg	Pro	Val	Arg	Phe	Ala	Asp	Ser	Ala	Arg	His
			325						330					335	
Leu	Gln	Thr	Leu	Gly	Ala	Thr	His	Phe	Ile	Glu	Ala	Gly	Pro	Gly	Ser
		340						345					350		
Gly	Leu	Thr	Gly	Ser	Ile	Glu	Gln	Ser	Leu	Ala	Pro	Ala	Glu	Ala	Met
	355					360					365				
Val	Val	Ser	Met	Leu	Gly	Lys	Asp	Arg	Pro	Glu	Leu	Ala	Ser	Ala	Leu
	370					375					380				

Gly	Ala	Ala	Gly	Gln	Val	Phe	Thr	Thr	Gly	Val	Pro	Val	Gln	Trp	Ser	385	390	395	400
Ala	Val	Phe	Ala	Gly	Ser	Gly	Gly	Arg	Arg	Val	Gln	Leu	Pro	Thr	Tyr	405	410	415	
Ala	Phe	Gln	Arg	Arg	Arg	Phe	Trp	Glu	Thr	Pro	Gly	Ala	Asp	Gly	Pro	420	425	430	
Ala	Asp	Ala	Ala	Gly	Leu	Gly	Leu	Gly	Ala	Thr	Glu	His	Ala	Leu	Leu	435	440	445	
Gly	Ala	Val	Val	Glu	Arg	Pro	Asp	Ser	Asp	Glu	Val	Val	Leu	Thr	Gly	450	455	460	
Arg	Leu	Ser	Leu	Ala	Asp	Gln	Pro	Trp	Leu	Ala	Asp	His	Val	Val	Asn	465	470	475	480
Gly	Val	Val	Leu	Phe	Pro	Gly	Ala	Gly	Phe	Val	Glu	Leu	Val	Ile	Arg	485	490	495	
Ala	Gly	Asp	Glu	Val	Gly	Cys	Ala	Leu	Ile	Glu	Glu	Leu	Val	Leu	Ala	500	505	510	
Ala	Pro	Leu	Val	Met	His	Pro	Gly	Val	Gly	Val	Gln	Val	Gln	Val	Val	515	520	525	
Val	Gly	Ala	Ala	Asp	Glu	Ser	Gly	His	Arg	Ala	Val	Ser	Val	Tyr	Ser	530	535	540	
Arg	Gly	Asp	Gln	Ser	Gln	Gly	Trp	Leu	Leu	Asn	Ala	Glu	Gly	Met	Leu	545	550	555	560
Gly	Val	Ala	Ala	Ala	Glu	Thr	Pro	Met	Asp	Leu	Ser	Val	Trp	Pro	Pro	565	570	575	
Glu	Gly	Ala	Glu	Ser	Val	Asp	Ile	Ser	Asp	Gly	Tyr	Ala	Gln	Leu	Ala	580	585	590	
Glu	Arg	Gly	Tyr	Ala	Tyr	Gly	Pro	Ala	Phe	Gln	Gly	Leu	Val	Ala	Ile	595	600	605	
Trp	Arg	Arg	Gly	Ser	Glu	Leu	Phe	Ala	Glu	Val	Val	Ala	Pro	Gly	Glu	610	615	620	
Ala	Gly	Val	Ala	Val	Asp	Arg	Met	Gly	Met	His	Pro	Ala	Val	Leu	Asp	625	630	635	640
Ala	Val	Leu	His	Ala	Leu	Gly	Leu	Ala	Val	Glu	Lys	Thr	Gln	Ala	Ser	645	650	655	
Thr	Glu	Thr	Arg	Leu	Pro	Phe	Cys	Trp	Arg	Gly	Val	Ser	Leu	His	Ala	660	665	670	
Gly	Gly	Ala	Gly	Arg	Val	Arg	Ala	Arg	Phe	Ala	Ser	Ala	Gly	Ala	Asp	675	680	685	
Ala	Ile	Ser	Val	Asp	Val	Cys	Asp	Ala	Thr	Gly	Leu	Pro	Val	Leu	Thr	690	695	700	
Val	Arg	Ser	Leu	Val	Thr	Arg	Pro	Ile	Thr	Ala	Glu	Gln	Leu	Arg	Ala	705	710	715	720
Ala	Val	Thr	Ala	Ala	Gly	Gly	Ala	Ser	Asp	Gln	Gly	Pro	Leu	Glu	Val	725	730	735	
Val	Trp	Ser	Pro	Ile	Ser	Val	Val	Ser	Gly	Gly	Ala	Asn	Gly	Ser	Ala	740	745	750	
Pro	Pro	Ala	Pro	Val	Ser	Trp	Ala	Asp	Phe	Cys	Ala	Gly	Ser	Asp	Gly	755	760	765	
Asp	Ala	Ser	Val	Val	Val	Trp	Glu	Leu	Glu	Ser	Ala	Gly	Gly	Gln	Ala	770	775	780	
Ser	Ser	Val	Val	Gly	Ser	Val	Tyr	Ala	Ala	Thr	His	Thr	Ala	Leu	Glu	785	790	795	800
Val	Leu	Gln	Ser	Trp	Leu	Gly	Ala	Asp	Arg	Ala	Ala	Thr	Leu	Val	Val	805	810	815	
Leu	Thr	His	Gly	Gly	Val	Gly	Leu	Ala	Gly	Glu	Asp	Ile	Ser	Asp	Leu	820	825	830	
Ala	Ala	Ala	Ala	Val	Trp	Gly	Met	Ala	Arg	Ser	Ala	Gln	Ala	Glu	Asn				

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Pro Gly Arg Ile Val Leu Ile Asp Thr Asp Ala Ala Val Asp Ala Ser		
850	855	860
Val Leu Ala Gly Val Gly Glu Pro Gln Leu Leu Val Arg Gly Gly Thr		
865	870	875
Val His Ala Pro Arg Leu Ser Pro Ala Pro Ala Leu Leu Ala Leu Pro		
885	890	895
Ala Ala Glu Ser Ala Trp Arg Leu Ala Ala Gly Gly Gly Gly Thr Leu		
900	905	910
Glu Asp Leu Val Ile Gln Pro Cys Pro Glu Val Gln Ala Pro Leu Gln		
915	920	925
Ala Gly Gln Val Arg Val Ala Val Ala Ala Val Gly Val Asn Phe Arg		
930	935	940
Asp Val Val Ala Ala Leu Gly Met Tyr Pro Gly Gln Ala Pro Pro Leu		
945	950	955
Gly Ala Glu Gly Ala Gly Val Val Leu Glu Thr Gly Pro Glu Val Thr		
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Asp Leu Ala Val Gly Asp Ala Val Met Gly Phe Leu Gly Gly Ala Gly		
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Pro Leu Ala Val Val Asp Gln Gln Leu Val Thr Arg Val Pro Gln Gly		
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Trp Ser Phe Ala Gln Ala Ala Ala Val Pro Val Val Phe Leu Thr Ala		
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Trp Tyr Gly Leu Ala Asp Leu Ala Glu Ile Lys Ala Gly Glu Ser Val		
1025	1030	1035
Leu Ile His Ala Gly Thr Gly Gly Val Gly Met Ala Ala Val Gln Leu		
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Ala Arg Gln Trp Gly Val Glu Val Phe Val Thr Ala Ser Arg Gly Lys		
1060	1065	1070
Trp Asp Thr Leu Arg Ala Met Gly Phe Asp Asp Asp His Ile Gly Asp		
1075	1080	1085
Ser Arg Thr Cys Glu Phe Glu Glu Lys Phe Leu Ala Val Thr Glu Gly		
1090	1095	1100
Arg Gly Val Asp Val Val Leu Asp Ser Leu Ala Gly Glu Phe Val Asp		
1105	1110	1115
Ala Ser Leu Arg Leu Leu Val Arg Gly Gly Arg Phe Leu Glu Met Gly		
1125	1130	1135
Lys Thr Asp Ile Arg Asp Ala Gln Glu Ile Ala Ala Asn Tyr Pro Gly		
1140	1145	1150
Val Gln Tyr Arg Ala Phe Asp Leu Ser Glu Ala Gly Pro Ala Arg Met		
1155	1160	1165
Gln Glu Met Leu Ala Glu Val Arg Glu Leu Phe Asp Thr Arg Glu Leu		
1170	1175	1180
His Arg Leu Pro Val Thr Thr Trp Asp Val Arg Cys Ala Pro Ala Ala		
1185	1190	1195
Phe Arg Phe Met Ser Gln Ala Arg His Ile Gly Lys Val Val Leu Thr		
1205	1210	1215
Met Pro Ser Ala Leu Ala Asp Arg Leu Ala Asp Gly Thr Val Val Ile		
1220	1225	1230
Thr Gly Ala Thr Gly Ala Val Gly Gly Val Leu Ala Arg His Leu Val		
1235	1240	1245
Gly Ala Tyr Gly Val Arg His Leu Val Leu Ala Ser Arg Arg Gly Asp		
1250	1255	1260
Arg Ala Glu Gly Ala Ala Glu Leu Ala Ala Asp Leu Thr Glu Ala Gly		
1265	1270	1275
Ala Lys Val Gln Val Val Ala Cys Asp Val Ala Asp Arg Ala Ala Val		
1285	1290	1295

Ala Gly Leu Phe Ala Gln Leu Ser Arg Glu Tyr Pro Pro Val Arg Gly
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 Val Ile His Ala Ala Gly Val Leu Asp Asp Ala Val Ile Thr Ser Leu
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 Thr Pro Asp Arg Ile Asp Thr Val Leu Arg Ala Lys Val Asp Ala Ala
 1330 1335 1340
 Trp Asn Leu His Gln Ala Thr Ser Asp Leu Asp Leu Ser Met Phe Ala
 1345 1350 1355 1360
 Leu Cys Ser Ser Ile Ala Ala Thr Val Gly Ser Pro Gly Gln Gly Asn
 1365 1370 1375
 Tyr Ser Ala Ala Asn Ala Phe Leu Asp Gly Leu Ala Ala His Arg Gln
 1380 1385 1390
 Ala Ala Gly Leu Ala Gly Ile Ser Leu Ala Trp Gly Leu Trp Glu Gln
 1395 1400 1405
 Pro Gly Gly Met Thr Ala His Leu Ser Ser Arg Asp Leu Ala Arg Met
 1410 1415 1420
 Ser Arg Ser Gly Leu Ala Pro Met Ser Pro Ala Glu Ala Val Glu Leu
 1425 1430 1435 1440
 Phe Asp Ala Ala Leu Ala Ile Asp His Pro Leu Ala Val Ala Thr Leu
 1445 1450 1455
 Leu Asp Arg Ala Ala Leu Asp Ala Arg Ala Gln Ala Gly Ala Leu Pro
 1460 1465 1470
 Ala Leu Phe Ser Gly Leu Ala Arg Arg Pro Arg Arg Arg Gln Ile Asp
 1475 1480 1485
 Asp Thr Gly Asp Ala Thr Ser Lys Ser Ala Leu Ala Gln Arg Leu
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 His Gly Leu Ala Ala Asp Glu Gln Leu Glu Leu Val Gly Leu Val
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 Cys Leu Gln Ala Ala Ala Val Leu Gly Arg Pro Ser Ala Glu Asp Val
 1525 1530 1535
 Asp Pro Asp Thr Glu Phe Gly Asp Leu Gly Phe Asp Ser Leu Thr Ala
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 Val Glu Leu Arg Asn Arg Leu Lys Thr Ala Thr Gly Leu Thr Leu Pro
 1555 1560 1565
 Pro Thr Val Ile Phe Asp His Pro Thr Pro Thr Ala Val Ala Glu Tyr
 1570 1575 1580
 Val Ala Gln Gln Met Ser Gly Ser Arg Pro Thr Glu Ser Gly Asp Pro
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 Thr Ser Gln Val Val Glu Pro Ala Ala Ala Glu Val Ser Val His Ala
 1605 1610 1615

<210> 263

<211> 691

<212> PRT

<213> Mycobacterium tuberculosis

<400> 263

Val Ser Ser Pro Asp Ala Asp Gln Thr Ala Pro Glu Val Leu Arg Gln
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 Trp Gln Ala Leu Ala Glu Glu Val Arg Glu His Gln Phe Arg Tyr Tyr
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 Val Arg Asp Ala Pro Ile Ile Ser Asp Ala Glu Phe Asp Glu Leu Leu
 35 40 45
 Arg Arg Leu Glu Ala Leu Glu Glu Gln His Pro Glu Leu Arg Thr Pro
 50 55 60
 Asp Ser Pro Thr Gln Leu Val Gly Gly Ala Gly Phe Ala Thr Asp Phe
 65 70 75 80

Glu	Pro	Val	Asp	His	Leu	Glu	Arg	Met	Leu	Ser	Leu	Asp	Asn	Ala	Phe	85	90	95
Thr	Ala	Asp	Glu	Leu	Ala	Ala	Trp	Ala	Gly	Arg	Ile	His	Ala	Glu	Val	100	105	110
Gly	Asp	Ala	Ala	His	Tyr	Leu	Cys	Glu	Leu	Lys	Ile	Asp	Gly	Val	Ala	115	120	125
Leu	Ser	Leu	Val	Tyr	Arg	Glu	Gly	Arg	Leu	Thr	Arg	Ala	Ser	Thr	Arg	130	135	140
Gly	Asp	Gly	Arg	Thr	Gly	Glu	Asp	Val	Thr	Leu	Asn	Ala	Arg	Thr	Ile	145	150	155
Ala	Asp	Val	Pro	Glu	Arg	Leu	Thr	Pro	Gly	Asp	Asp	Tyr	Pro	Val	Pro	165	170	175
Glu	Val	Leu	Glu	Val	Arg	Gly	Glu	Val	Phe	Phe	Arg	Leu	Asp	Asp	Phe	180	185	190
Gln	Ala	Leu	Asn	Ala	Ser	Leu	Val	Glu	Glu	Gly	Lys	Ala	Pro	Phe	Ala	195	200	205
Asn	Pro	Arg	Asn	Ser	Ala	Ala	Gly	Ser	Leu	Arg	Gln	Lys	Asp	Pro	Ala	210	215	220
Val	Thr	Ala	Arg	Arg	Arg	Leu	Arg	Met	Ile	Cys	His	Gly	Leu	Gly	His	225	230	235
Val	Glu	Gly	Phe	Arg	Pro	Ala	Thr	Leu	His	Gln	Ala	Tyr	Leu	Ala	Leu	245	250	255
Arg	Ala	Trp	Gly	Leu	Pro	Val	Ser	Glu	His	Thr	Thr	Leu	Ala	Thr	Asp	260	265	270
Leu	Ala	Gly	Val	Arg	Glu	Arg	Ile	Asp	Tyr	Trp	Gly	Glu	His	Arg	His	275	280	285
Glu	Val	Asp	His	Glu	Ile	Asp	Gly	Val	Val	Val	Lys	Val	Asp	Glu	Val	290	295	300
Ala	Leu	Gln	Arg	Arg	Leu	Gly	Ser	Thr	Ser	Arg	Ala	Pro	Arg	Trp	Ala	305	310	315
Ile	Ala	Tyr	Lys	Tyr	Pro	Pro	Glu	Glu	Ala	Gln	Thr	Lys	Leu	Leu	Asp	325	330	335
Ile	Arg	Val	Asn	Val	Gly	Arg	Thr	Gly	Arg	Ile	Thr	Pro	Phe	Ala	Phe	340	345	350
Met	Thr	Pro	Val	Lys	Val	Ala	Gly	Ser	Thr	Val	Gly	Gln	Ala	Thr	Leu	355	360	365
His	Asn	Ala	Ser	Glu	Ile	Lys	Arg	Lys	Gly	Val	Leu	Ile	Gly	Asp	Thr	370	375	380
Val	Val	Ile	Arg	Lys	Ala	Gly	Asp	Val	Ile	Pro	Glu	Val	Leu	Gly	Pro	385	390	395
Val	Val	Glu	Leu	Arg	Asp	Gly	Ser	Glu	Arg	Glu	Phe	Ile	Met	Pro	Thr	405	410	415
Thr	Cys	Pro	Glu	Cys	Gly	Ser	Pro	Leu	Ala	Pro	Glu	Lys	Glu	Gly	Asp	420	425	430
Ala	Asp	Ile	Arg	Cys	Pro	Asn	Ala	Arg	Gly	Cys	Pro	Gly	Gln	Leu	Arg	435	440	445
Glu	Arg	Val	Phe	His	Val	Ala	Ser	Arg	Asn	Gly	Leu	Asp	Ile	Glu	Val	450	455	460
Leu	Gly	Tyr	Glu	Ala	Gly	Val	Ala	Leu	Leu	Gln	Ala	Lys	Val	Ile	Ala	465	470	475
Asp	Glu	Gly	Glu	Leu	Phe	Ala	Leu	Thr	Glu	Arg	Asp	Leu	Leu	Arg	Thr	485	490	495
Asp	Leu	Phe	Arg	Thr	Lys	Ala	Gly	Glu	Leu	Ser	Ala	Asn	Gly	Lys	Arg	500	505	510
Leu	Leu	Val	Asn	Leu	Asp	Lys	Ala	Lys	Ala	Ala	Pro	Leu	Trp	Arg	Val	515	520	525
Leu	Val	Ala	Leu	Ser	Ile	Arg	His	Val	Gly	Pro	Thr	Ala	Ala	Arg	Ala			

530		535		540
Leu Ala Thr Glu Phe Gly Ser Leu Asp Ala Ile Ala Ala Ser Thr				
545		550		555
Asp Gln Leu Ala Ala Val Glu Gly Val Gly Pro Thr Ile Ala Ala Ala				560
	565		570	
Val Thr Glu Trp Phe Ala Val Asp Trp His Arg Glu Ile Val Asp Lys				575
	580		585	
Trp Arg Ala Ala Gly Val Arg Met Val Asp Glu Arg Asp Glu Ser Val				590
	595		600	
Pro Arg Thr Leu Ala Gly Leu Thr Ile Val Val Thr Gly Ser Leu Thr				605
	610		615	
Gly Phe Ser Arg Asp Asp Ala Lys Glu Ala Ile Val Ala Arg Gly Gly				620
	625		630	
Lys Ala Ala Gly Ser Val Ser Lys Lys Thr Asn Tyr Val Val Ala Gly				635
	645		650	
Asp Ser Pro Gly Ser Lys Tyr Asp Lys Ala Val Glu Leu Gly Val Pro				655
	660		665	
Ile Leu Asp Glu Asp Gly Phe Arg Arg Leu Leu Ala Asp Gly Pro Ala				670
	675		680	
Ser Arg Thr				685
690				

<210> 264

<211> 393

<212> PRT

<213> Mycobacterium tuberculosis

<400> 264

Met Ala Tyr Leu Asp His Ala Ala Thr Thr Pro Met His Pro Ala Ala				
1	5		10	15
Ile Glu Ala Met Ala Ala Val Gln Arg Thr Ile Gly Asn Ala Ser Ser				
	20		25	30
Leu His Thr Ser Gly Arg Ser Ala Arg Arg Arg Ile Glu Glu Ala Arg				
	35		40	45
Glu Leu Ile Ala Asp Lys Leu Gly Ala Arg Pro Ser Glu Val Ile Phe				
	50		55	60
Thr Ala Gly Gly Thr Glu Ser Asp Asn Leu Ala Val Lys Gly Ile Tyr				
	65		70	75
Trp Ala Arg Arg Asp Ala Glu Pro His Arg Arg Arg Ile Val Thr Thr				
	85		90	95
Glu Val Glu His His Ala Val Leu Asp Ser Val Asn Trp Leu Val Glu				
	100		105	110
His Glu Gly Ala His Val Thr Trp Leu Pro Thr Ala Ala Asp Gly Ser				
	115		120	125
Val Ser Ala Thr Ala Leu Arg Glu Ala Leu Gln Ser His Asp Asp Val				
	130		135	140
Ala Leu Val Ser Val Met Trp Ala Asn Asn Glu Val Gly Thr Ile Leu				
	145		150	155
Pro Ile Ala Glu Met Ser Val Val Ala Met Glu Phe Gly Val Pro Met				
	165		170	175
His Ser Asp Ala Ile Gln Ala Val Gly Gln Leu Pro Leu Asp Phe Gly				
	180		185	190
Ala Ser Gly Leu Ser Ala Met Ser Val Ala Gly His Lys Phe Gly Gly				
	195		200	205
Pro Pro Gly Val Gly Ala Leu Leu Arg Arg Asp Val Thr Cys Val				
	210		215	220
Pro Leu Met His Gly Gly Gly Gln Glu Arg Asp Ile Arg Ser Gly Thr				

```

225          230          235          240
Pro Asp Val Ala Ser Ala Val Gly Met Ala Thr Ala Ala Gln Ile Ala
          245          250          255
Val Asp Gly Leu Glu Glu Asn Ser Ala Arg Leu Arg Leu Leu Arg Asp
          260          265          270
Arg Leu Val Glu Gly Val Leu Ala Glu Ile Asp Asp Val Cys Leu Asn
          275          280          285
Gly Ala Asp Asp Pro Met Arg Leu Ala Gly Asn Ala His Phe Thr Phe
          290          295          300
Arg Gly Cys Glu Gly Asp Ala Leu Leu Met Leu Leu Asp Ala Asn Gly
305          310          315          320
Ile Glu Cys Ser Thr Gly Ser Ala Cys Thr Ala Gly Val Ala Gln Pro
          325          330          335
Ser His Val Leu Ile Ala Met Gly Val Asp Ala Ala Ser Ala Arg Gly
          340          345          350
Ser Leu Arg Leu Ser Leu Gly His Thr Ser Val Glu Ala Asp Val Asp
          355          360          365
Ala Ala Leu Glu Val Leu Pro Gly Ala Val Ala Arg Ala Arg Arg Ala
          370          375          380
Ala Leu Ala Ala Ala Gly Ala Ser Arg
385          390

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<210> 265

<211> 1110

<212> PRT

<213> Mycobacterium tuberculosis

<400> 265

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Met Thr Asp Val Asp Pro His Ala Thr Arg Arg Asp Leu Val Pro Asn
 1          5          10          15
Ile Pro Ala Glu Leu Leu Glu Ala Gly Phe Asp Asn Val Glu Glu Ile
          20          25          30
Gly Arg Gly Gly Phe Gly Val Val Tyr Arg Cys Val Gln Pro Ser Leu
          35          40          45
Asp Arg Ala Val Ala Val Lys Val Leu Ser Thr Asp Leu Asp Arg Asp
          50          55          60
Asn Leu Glu Arg Phe Leu Arg Glu Gln Arg Ala Met Gly Arg Leu Ser
65          70          75          80
Gly His Pro His Ile Val Thr Val Leu Gln Val Gly Val Leu Ala Gly
          85          90          95
Gly Arg Pro Phe Ile Val Met Pro Tyr His Ala Lys Asn Ser Leu Glu
          100          105          110
Thr Leu Ile Arg Arg His Gly Pro Leu Asp Trp Arg Glu Thr Leu Ser
          115          120          125
Ile Gly Val Lys Leu Ala Gly Ala Leu Glu Ala Ala His Arg Val Gly
          130          135          140
Thr Leu His Arg Asp Val Lys Pro Gly Asn Ile Leu Leu Thr Asp Tyr
145          150          155          160
Gly Glu Pro Gln Leu Thr Asp Phe Gly Ile Ala Arg Ile Ala Gly Gly
          165          170          175
Phe Glu Thr Ala Thr Gly Val Ile Ala Gly Ser Pro Ala Phe Thr Ala
          180          185          190
Pro Glu Val Leu Glu Gly Ala Ser Pro Thr Pro Ala Ser Asp Val Tyr
          195          200          205
Ser Leu Gly Ala Thr Leu Phe Cys Ala Leu Thr Gly His Ala Ala Tyr
          210          215          220
Glu Arg Arg Ser Gly Glu Arg Val Ile Ala Gln Phe Leu Arg Ile Thr

```

225					230					235				240
Ser	Gln	Pro	Ile	Pro	Asp	Leu	Arg	Lys	Gln	Gly	Leu	Pro	Ala	Asp
				245					250					255
Ala	Ala	Ala	Ile	Glu	Arg	Ala	Met	Ala	Arg	His	Pro	Ala	Asp	Arg
			260					265					270	
Ala	Thr	Ala	Ala	Asp	Val	Gly	Glu	Glu	Leu	Arg	Asp	Val	Gln	Arg
			275					280					285	
Asn	Gly	Val	Ser	Val	Asp	Glu	Met	Pro	Leu	Pro	Val	Glu	Leu	Gly
								295			300			
Glu	Arg	Arg	Arg	Ser	Pro	Glu	Ala	His	Ala	Ala	His	Arg	His	Thr
305					310					315				320
Gly	Gly	Thr	Pro	Thr	Val	Pro	Thr	Pro	Pro	Thr	Pro	Ala	Thr	Lys
					325				330					335
Arg	Pro	Ser	Val	Pro	Thr	Gly	Ser	Leu	Val	Thr	Arg	Ser	Arg	Leu
			340					345					350	
Asp	Ile	Leu	Arg	Ala	Gly	Gly	Arg	Arg	Arg	Leu	Ile	Leu	Ile	His
			355				360					365		
Pro	Ser	Gly	Phe	Gly	Lys	Ser	Thr	Leu	Ala	Ala	Gln	Trp	Arg	Glu
			370			375					380			
Leu	Ser	Arg	Asp	Gly	Ala	Ala	Val	Ala	Trp	Leu	Thr	Ile	Asp	Asn
385					390					395				400
Asp	Asn	Asn	Glu	Val	Trp	Phe	Leu	Ser	His	Leu	Leu	Glu	Ser	Ile
				405					410					415
Arg	Val	Arg	Pro	Thr	Leu	Ala	Glu	Ser	Leu	Gly	His	Val	Leu	Glu
			420					425					430	
His	Gly	Asp	Asp	Ala	Gly	Arg	Tyr	Val	Leu	Thr	Ser	Leu	Ile	Asp
			435				440					445		
Ile	His	Glu	Asn	Asp	Asp	Arg	Ile	Ala	Val	Val	Ile	Asp	Asp	Trp
			450			455					460			
Arg	Val	Ser	Asp	Ser	Arg	Thr	Gln	Ala	Ala	Leu	Gly	Phe	Leu	Leu
465					470					475				480
Asn	Gly	Cys	His	His	Leu	Gln	Leu	Ile	Val	Thr	Ser	Trp	Ser	Arg
				485					490					495
Gly	Leu	Pro	Val	Gly	Arg	Leu	Arg	Ile	Gly	Asp	Glu	Leu	Ala	Glu
			500					505					510	
Asp	Ser	Ala	Ala	Leu	Arg	Phe	Asp	Thr	Asp	Glu	Ala	Ala	Ala	Leu
			515				520					525		
Asn	Asp	Ala	Gly	Gly	Leu	Arg	Leu	Pro	Arg	Ala	Asp	Val	Gln	Ala
						535					540			
Thr	Thr	Ser	Thr	Asp	Gly	Trp	Ala	Ala	Ala	Leu	Arg	Leu	Ala	Ala
545					550					555				560
Ser	Leu	Arg	Gly	Gly	Gly	Asp	Ala	Thr	Gln	Leu	Leu	Arg	Gly	Leu
				565					570					575
Gly	Ala	Ser	Asp	Val	Ile	His	Glu	Phe	Leu	Ser	Glu	Asn	Val	Leu
			580					585					590	
Thr	Leu	Glu	Pro	Glu	Leu	Arg	Glu	Phe	Leu	Leu	Val	Ala	Ser	Val
			595				600					605		
Glu	Arg	Thr	Cys	Gly	Gly	Leu	Ala	Ser	Ala	Leu	Ala	Gly	Ile	Thr
						615						620		
Gly	Arg	Ala	Met	Leu	Glu	Glu	Ala	Glu	His	Arg	Gly	Leu	Phe	Leu
625					630					635				640
Arg	Thr	Glu	Asp	Asp	Pro	Asn	Trp	Phe	Arg	Phe	His	Gln	Met	Phe
				645					650					655
Asp	Phe	Leu	His	Arg	Arg	Leu	Glu	Arg	Gly	Gly	Ser	His	Arg	Val
			660					665					670	
Glu	Leu	His	Arg	Arg	Ala	Ser	Ala	Trp	Phe	Ala	Glu	Asn	Gly	Tyr
			675				680						685	

His	Glu	Ala	Val	Asp	His	Ala	Leu	Ala	Ala	Gly	Asp	Pro	Ala	Arg	Ala		
690						695					700						
Val	Asp	Leu	Val	Glu	Gln	Asp	Glu	Thr	Asn	Leu	Pro	Glu	Gln	Ser	Lys		
705					710					715					720		
Met	Thr	Thr	Leu	Leu	Ala	Ile	Val	Gln	Lys	Leu	Pro	Thr	Ser	Met	Val		
				725					730					735			
Val	Ser	Arg	Ala	Arg	Leu	Gln	Leu	Ala	Ile	Ala	Trp	Ala	Asn	Ile	Leu		
			740					745					750				
Leu	Gln	Arg	Pro	Ala	Pro	Ala	Thr	Gly	Ala	Leu	Asn	Arg	Phe	Glu	Thr		
			755				760					765					
Ala	Leu	Gly	Arg	Ala	Glu	Leu	Pro	Glu	Ala	Thr	Gln	Ala	Asp	Leu	Arg		
	770				775						780						
Ala	Glu	Ala	Asp	Val	Leu	Arg	Ala	Val	Ala	Glu	Val	Phe	Ala	Asp	Arg		
785					790					795					800		
Val	Glu	Arg	Val	Asp	Asp	Leu	Leu	Ala	Glu	Ala	Met	Ser	Arg	Pro	Asp		
				805					810					815			
Thr	Leu	Pro	Pro	Arg	Val	Pro	Gly	Thr	Ala	Gly	Asn	Thr	Ala	Ala	Leu		
			820					825					830				
Ala	Ala	Ile	Cys	Arg	Phe	Glu	Phe	Ala	Glu	Val	Tyr	Pro	Leu	Leu	Asp		
		835					840					845					
Trp	Ala	Ala	Pro	Tyr	Gln	Glu	Met	Met	Gly	Pro	Phe	Gly	Thr	Val	Tyr		
	850					855					860						
Ala	Gln	Cys	Leu	Arg	Gly	Met	Ala	Ala	Arg	Asn	Arg	Leu	Asp	Ile	Val		
865					870					875					880		
Ala	Ala	Leu	Gln	Asn	Phe	Arg	Thr	Ala	Phe	Glu	Val	Gly	Thr	Ala	Val		
			885					890						895			
Gly	Ala	His	Ser	His	Ala	Ala	Arg	Leu	Ala	Gly	Ser	Leu	Leu	Ala	Glu		
		900					905						910				
Leu	Leu	Tyr	Glu	Thr	Gly	Asp	Leu	Ala	Gly	Ala	Gly	Arg	Leu	Met	Asp		
		915					920					925					
Glu	Ser	Tyr	Leu	Leu	Gly	Ser	Glu	Gly	Gly	Ala	Val	Asp	Tyr	Leu	Ala		
	930					935					940						
Ala	Arg	Tyr	Val	Ile	Gly	Ala	Arg	Val	Lys	Ala	Ala	Gln	Gly	Asp	His		
945					950					955					960		
Glu	Gly	Ala	Ala	Asp	Arg	Leu	Ser	Thr	Gly	Gly	Asp	Thr	Ala	Val	Gln		
				965					970					975			
Leu	Gly	Leu	Pro	Arg	Leu	Ala	Ala	Arg	Ile	Asn	Asn	Glu	Arg	Ile	Arg		
			980					985					990				
Leu	Gly	Ile	Ala	Leu	Pro	Ala	Ala	Val	Ala	Ala	Asp	Leu	Leu	Ala	Pro		
	995					1000						1005					
Arg	Thr	Ile	Pro	Arg	Asp	Asn	Gly	Ile	Ala	Thr	Met	Thr	Ala	Glu	Leu		
	1010					1015					1020						
Asp	Glu	Asp	Ser	Ala	Val	Arg	Leu	Leu	Ser	Ala	Gly	Asp	Ser	Ala	Asp		
1025					1030					1035					1040		
Arg	Asp	Gln	Ala	Cys	Gln	Arg	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ile	Asp		
				1045					1050					1055			
Gly	Thr	Arg	Arg	Pro	Leu	Ala	Ala	Leu	Gln	Ala	Gln	Ile	Leu	His	Ile		
			1060					1065					1070				
Glu	Thr	Leu	Ala	Ala	Thr	Gly	Arg	Glu	Ser	Asp	Ala	Arg	Asn	Glu	Leu		
	1075					1080					1085						
Ala	Pro	Val	Ala	Thr	Lys	Cys	Ala	Glu	Leu	Gly	Leu	Ser	Arg	Leu	Leu		
	1090					1095					1100						
Val	Asp	Ala	Gly	Leu	Ala												
1105					1110												

<210> 266

<211> 456

<212> PRT

<213> Mycobacterium tuberculosis

<400> 266

Met	Arg	Pro	Tyr	Tyr	Ile	Ala	Ile	Val	Gly	Ser	Gly	Pro	Ser	Ala	Phe
1				5					10					15	
Phe	Ala	Ala	Ala	Ser	Leu	Leu	Lys	Ala	Ala	Asp	Thr	Thr	Glu	Asp	Leu
			20					25					30		
Asp	Met	Ala	Val	Asp	Met	Leu	Glu	Met	Leu	Pro	Thr	Pro	Trp	Gly	Leu
		35					40					45			
Val	Arg	Ser	Gly	Val	Ala	Pro	Asp	His	Pro	Lys	Ile	Lys	Ser	Ile	Ser
	50					55					60				
Lys	Gln	Phe	Glu	Lys	Thr	Ala	Glu	Asp	Pro	Arg	Phe	Arg	Phe	Phe	Gly
65					70					75					80
Asn	Val	Val	Val	Gly	Glu	His	Val	Gln	Pro	Gly	Glu	Leu	Ser	Glu	Arg
				85					90					95	
Tyr	Asp	Ala	Val	Ile	Tyr	Ala	Val	Gly	Ala	Gln	Ser	Asp	Arg	Met	Leu
			100					105					110		
Asn	Ile	Pro	Gly	Glu	Asp	Leu	Pro	Gly	Ser	Ile	Ala	Ala	Val	Asp	Phe
		115					120					125			
Val	Gly	Trp	Tyr	Asn	Ala	His	Pro	His	Phe	Glu	Gln	Val	Ser	Pro	Asp
	130					135					140				
Leu	Ser	Gly	Ala	Arg	Ala	Val	Val	Ile	Gly	Asn	Gly	Asn	Val	Ala	Leu
145					150					155					160
Asp	Val	Ala	Arg	Ile	Leu	Leu	Thr	Asp	Pro	Asp	Val	Leu	Ala	Arg	Thr
				165					170					175	
Asp	Ile	Ala	Asp	His	Ala	Leu	Glu	Ser	Leu	Arg	Pro	Arg	Gly	Ile	Gln
			180					185					190		
Glu	Val	Val	Ile	Val	Gly	Arg	Arg	Gly	Pro	Leu	Gln	Ala	Ala	Phe	Thr
		195					200					205			
Thr	Leu	Glu	Leu	Arg	Glu	Leu	Ala	Asp	Leu	Asp	Gly	Val	Asp	Val	Val
	210					215					220				
Ile	Asp	Pro	Ala	Glu	Leu	Asp	Gly	Ile	Thr	Asp	Glu	Asp	Ala	Ala	Ala
225					230					235					240
Val	Gly	Lys	Val	Cys	Lys	Gln	Asn	Ile	Lys	Val	Leu	Arg	Gly	Tyr	Ala
				245					250					255	
Asp	Arg	Glu	Pro	Arg	Pro	Gly	His	Arg	Arg	Met	Val	Phe	Arg	Phe	Leu
			260					265					270		
Thr	Ser	Pro	Ile	Glu	Ile	Lys	Gly	Lys	Arg	Lys	Val	Glu	Arg	Ile	Val
		275					280					285			
Leu	Gly	Arg	Asn	Glu	Leu	Val	Ser	Asp	Gly	Ser	Gly	Arg	Val	Ala	Ala
	290					295					300				
Lys	Asp	Thr	Gly	Glu	Arg	Glu	Glu	Leu	Pro	Ala	Gln	Leu	Val	Val	Arg
305					310					315					320
Ser	Val	Gly	Tyr	Arg	Gly	Val	Pro	Thr	Pro	Gly	Leu	Pro	Phe	Asp	Asp
				325					330					335	
Gln	Ser	Gly	Thr	Ile	Pro	Asn	Val	Gly	Gly	Arg	Ile	Asn	Gly	Ser	Pro
			340					345					350		
Asn	Glu	Tyr	Val	Val	Gly	Trp	Ile	Lys	Arg	Gly	Pro	Thr	Gly	Val	Ile
		355					360					365			
Gly	Thr	Asn	Lys	Lys	Asp	Ala	Gln	Asp	Thr	Val	Asp	Thr	Leu	Ile	Lys
	370					375					380				
Asn	Leu	Gly	Asn	Ala	Lys	Glu	Gly	Ala	Glu	Cys	Lys	Ser	Phe	Pro	Glu
385					390					395					400
Asp	His	Ala	Asp	Gln	Val	Ala	Asp	Trp	Leu	Ala	Ala	Arg	Gln	Pro	Lys
				405					410				415		
Leu	Val	Thr	Ser	Ala	His	Trp	Gln	Val	Ile	Asp	Ala	Phe	Glu	Arg	Ala

Ala Gly Glu Pro His Gly Arg Pro Arg Val Lys Leu Ala Ser Leu Ala
 420 425 430
 435 440 445
 Glu Leu Leu Arg Ile Gly Leu Gly
 450 455

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<210> 267
<211> 213
<212> PRT
<213> Mycobacterium tuberculosis
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[illegible]

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<210> 268
<211> 408
<212> PRT
<213> Mycobacterium tuberculosis
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<400> 268															
Val	Glu	Leu	Leu	Arg	Gly	Ala	Leu	Arg	Thr	Tyr	Ala	Trp	Gly	Ser	Arg
1				5					10					15	
Thr	Ala	Ile	Ala	Glu	Phe	Thr	Gly	Arg	Pro	Val	Pro	Ala	Ala	His	Pro
			20					25					30		
Glu	Ala	Glu	Leu	Trp	Phe	Gly	Ala	His	Pro	Gly	Asp	Pro	Ala	Trp	Leu
		35				40					45				
Gln	Thr	Pro	His	Gly	Gln	Thr	Ser	Leu	Leu	Glu	Ala	Leu	Val	Ala	Asp
	50					55				60					
Pro	Glu	Gly	Gln	Leu	Gly	Ser	Ala	Ser	Arg	Ala	Arg	Phe	Gly	Asp	Val
65					70					75					80

```

Leu Pro Phe Leu Val Lys Val Leu Ala Ala Asp Glu Pro Leu Ser Leu
      85                      90                      95
Gln Ala His Pro Ser Ala Glu Gln Ala Val Glu Gly Tyr Leu Arg Glu
      100                      105                      110
Glu Arg Met Gly Ile Pro Val Ser Ser Pro Val Arg Asn Tyr Arg Asp
      115                      120                      125
Thr Ser His Lys Pro Glu Leu Leu Val Ala Leu Gln Pro Phe Glu Ala
      130                      135                      140
Leu Ala Gly Phe Arg Glu Ala Ala Arg Thr Thr Glu Leu Leu Arg Ala
      145                      150                      155                      160
Leu Ala Val Ser Asp Leu Asp Pro Phe Ile Asp Leu Leu Ser Glu Gly
      165                      170                      175
Ser Asp Ala Asp Gly Leu Arg Ala Leu Phe Thr Thr Trp Ile Thr Ala
      180                      185                      190
Pro Gln Pro Asp Ile Asp Val Leu Val Pro Ala Val Leu Asp Gly Ala
      195                      200                      205
Ile Gln Tyr Val Ser Ser Gly Ala Thr Glu Phe Gly Ala Glu Ala Lys
      210                      215                      220
Thr Val Leu Glu Leu Gly Glu Arg Tyr Pro Gly Asp Ala Gly Val Leu
      225                      230                      235                      240
Ala Ala Leu Leu Leu Asn Arg Ile Ser Leu Ala Pro Gly Glu Ala Ile
      245                      250                      255
Phe Leu Pro Ala Gly Asn Leu His Ala Tyr Val Arg Gly Phe Gly Val
      260                      265                      270
Glu Val Met Ala Asn Ser Asp Asn Val Leu Arg Gly Gly Leu Thr Pro
      275                      280                      285
Lys His Val Asp Val Pro Glu Leu Leu Arg Val Leu Asp Phe Ala Pro
      290                      295                      300
Thr Pro Lys Ala Arg Leu Arg Pro Pro Ile Arg Arg Glu Gly Leu Gly
      305                      310                      315                      320
Leu Val Phe Glu Thr Pro Thr Asp Glu Phe Ala Ala Thr Leu Leu Val
      325                      330                      335
Leu Asp Gly Asp His Leu Gly His Glu Val Asp Ala Ser Ser Gly His
      340                      345                      350
Asp Gly Pro Gln Ile Leu Leu Cys Thr Glu Gly Ser Ala Thr Val His
      355                      360                      365
Gly Lys Cys Gly Ser Leu Thr Leu Gln Arg Gly Thr Ala Ala Trp Val
      370                      375                      380
Ala Ala Asp Asp Gly Pro Ile Arg Leu Thr Ala Gly Gln Pro Ala Lys
      385                      390                      395                      400
Leu Phe Arg Ala Thr Val Gly Leu
      405

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<210> 269

<211> 359

<212> PRT

<213> Mycobacterium tuberculosis

<400> 269

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Leu Ala Thr His Gln Val Asp Ala Val Val Leu Val Gly Gly Lys Gly
1      5                      10                      15
Thr Arg Leu Arg Pro Leu Thr Leu Ser Ala Pro Lys Pro Met Leu Pro
      20                      25                      30
Thr Ala Gly Leu Pro Phe Leu Thr His Leu Leu Ser Arg Ile Ala Ala
      35                      40                      45
Ala Gly Ile Glu His Val Ile Leu Gly Thr Ser Tyr Lys Pro Ala Val
50                      55                      60

```


Phe Glu Ala Glu Phe Gly Asp Gly Ser Ala Leu Gly Leu Gln Ile Glu
 65 70 75 80
 Tyr Val Thr Glu Glu His Pro Leu Gly Thr Gly Gly Gly Ile Ala Asn
 85 90 95
 Val Ala Gly Lys Leu Arg Asn Asp Thr Ala Met Val Phe Asn Gly Asp
 100 105 110
 Val Leu Ser Gly Ala Asp Leu Ala Gln Leu Leu Asp Phe His Arg Ser
 115 120 125
 Asn Arg Ala Asp Val Thr Leu Gln Leu Val Arg Val Gly Asp Pro Arg
 130 135 140
 Ala Phe Gly Cys Val Pro Thr Asp Glu Glu Asp Arg Val Val Ala Phe
 145 150 155 160
 Leu Glu Lys Thr Glu Asp Pro Pro Thr Asp Gln Ile Asn Ala Gly Cys
 165 170 175
 Tyr Val Phe Glu Arg Asn Val Ile Asp Arg Ile Pro Gln Gly Arg Glu
 180 185 190
 Val Ser Val Glu Arg Glu Val Phe Pro Ala Leu Leu Ala Asp Gly Asp
 195 200 205
 Cys Lys Ile Tyr Gly Tyr Val Asp Ala Ser Tyr Trp Arg Asp Met Gly
 210 215 220
 Thr Pro Glu Asp Phe Val Arg Gly Ser Ala Asp Leu Val Arg Gly Ile
 225 230 235 240
 Ala Pro Ser Pro Ala Leu Arg Gly His Arg Gly Glu Gln Leu Val His
 245 250 255
 Asp Gly Ala Ala Val Ser Pro Gly Ala Leu Leu Ile Gly Gly Thr Val
 260 265 270
 Val Gly Arg Gly Ala Glu Ile Gly Pro Gly Thr Arg Leu Asp Gly Ala
 275 280 285
 Val Ile Phe Asp Gly Val Arg Val Glu Ala Gly Cys Val Ile Glu Arg
 290 295 300
 Ser Ile Ile Gly Phe Gly Ala Arg Ile Gly Pro Arg Ala Leu Ile Arg
 305 310 315 320
 Asp Gly Val Ile Gly Asp Gly Ala Asp Ile Gly Ala Arg Cys Glu Leu
 325 330 335
 Leu Ser Gly Ala Arg Val Trp Pro Gly Val Phe Leu Pro Asp Gly Gly
 340 345 350
 Ile Arg Tyr Ser Ser Asp Val
 355

<210> 270

<211> 214

<212> PRT

<213> Mycobacterium tuberculosis

<400> 270

Met Thr Leu Asn Leu Ser Val Asp Glu Val Leu Thr Thr Thr Arg Ser
 1 5 10 15
 Val Arg Lys Arg Leu Asp Phe Asp Lys Pro Val Pro Arg Asp Val Leu
 20 25 30
 Met Glu Cys Leu Glu Leu Ala Leu Gln Ala Pro Thr Gly Ser Asn Ser
 35 40 45
 Gln Gly Trp Gln Trp Val Phe Val Glu Asp Ala Ala Lys Lys Lys Ala
 50 55 60
 Ile Ala Asp Val Tyr Leu Ala Asn Ala Arg Gly Tyr Leu Ser Gly Pro
 65 70 75 80
 Ala Pro Glu Tyr Pro Asp Gly Asp Thr Arg Gly Glu Arg Met Gly Arg
 85 90 95

Val Arg Asp Ser Ala Thr Tyr Leu Ala Glu His Met His Arg Ala Pro
 100 105 110
 Val Leu Leu Ile Pro Cys Leu Lys Gly Arg Glu Asp Glu Ser Ala Val
 115 120 125
 Gly Gly Val Ser Phe Trp Ala Ser Leu Phe Pro Ala Val Trp Ser Phe
 130 135 140
 Cys Leu Ala Leu Arg Ser Arg Gly Leu Gly Ser Cys Trp Thr Thr Leu
 145 150 155 160
 His Leu Leu Asp Asn Gly Glu His Lys Val Ala Asp Val Leu Gly Ile
 165 170 175
 Pro Tyr Asp Glu Tyr Ser Gln Gly Gly Leu Leu Pro Ile Ala Tyr Thr
 180 185 190
 Gln Gly Ile Asp Phe Arg Pro Ala Lys Arg Leu Pro Ala Glu Ser Val
 195 200 205
 Thr His Trp Asn Gly Trp
 210

<210> 271

<211> 329

<212> PRT

<213> Mycobacterium tuberculosis

<400> 271

Met Ala Glu Val Phe Val Gly Pro Val Ala Gln Gly Tyr Ala Ser Gly
 1 5 10 15
 Glu Val Thr Val Leu Leu Ala Ser Pro Arg Ser Phe Cys Ala Gly Val
 20 25 30
 Glu Arg Ala Ile Glu Thr Val Lys Arg Val Leu Asp Val Ala Glu Gly
 35 40 45
 Pro Val Tyr Val Arg Lys Gln Ile Val His Asn Thr Val Val Val Ala
 50 55 60
 Glu Leu Arg Asp Arg Gly Ala Val Phe Val Glu Asp Leu Asp Glu Ile
 65 70 75 80
 Pro Asp Pro Pro Pro Pro Gly Ala Val Val Val Phe Ser Ala His Gly
 85 90 95
 Val Ser Pro Ala Val Arg Ala Gly Ala Asp Glu Arg Gly Leu Gln Val
 100 105 110
 Val Asp Ala Thr Cys Pro Leu Val Ala Lys Val His Ala Glu Ala Ala
 115 120 125
 Arg Phe Ala Ala Arg Gly Asp Thr Val Val Phe Ile Gly His Ala Gly
 130 135 140
 His Glu Glu Thr Glu Gly Thr Leu Gly Val Ala Pro Arg Ser Thr Leu
 145 150 155 160
 Leu Val Gln Thr Pro Ala Asp Val Ala Ala Leu Asn Leu Pro Glu Gly
 165 170 175
 Thr Gln Leu Ser Tyr Leu Thr Gln Thr Thr Leu Ala Leu Asp Glu Thr
 180 185 190
 Ala Asp Val Ile Asp Ala Leu Arg Ala Arg Phe Pro Thr Leu Gly Gln
 195 200 205
 Pro Pro Ser Glu Asp Ile Cys Tyr Ala Thr Thr Asn Arg Gln Arg Ala
 210 215 220
 Leu Gln Ser Met Val Gly Glu Cys Asp Val Val Leu Val Ile Gly Ser
 225 230 235 240
 Cys Asn Ser Ser Asn Ser Arg Arg Leu Val Glu Leu Ala Gln Arg Ser
 245 250 255
 Gly Thr Pro Ala Tyr Leu Ile Asp Gly Pro Asp Asp Ile Glu Pro Glu
 260 265 270

Trp Leu Ser Ser Val Ser Thr Ile Gly Val Thr Ala Gly Ala Ser Ala
 275 280 285
 Pro Pro Arg Leu Val Gly Gln Val Ile Asp Ala Leu Arg Gly Tyr Ala
 290 295 300
 Ser Ile Thr Val Val Glu Arg Ser Ile Ala Thr Glu Thr Val Arg Phe
 305 310 315 320
 Gly Leu Pro Lys Gln Val Arg Ala Gln
 325

<210> 272

<211> 100

<212> PRT

<213> Mycobacterium tuberculosis

<400> 272

Val Ala Lys Val Asn Ile Lys Pro Leu Glu Asp Lys Ile Leu Val Gln
 1 5 10 15
 Ala Asn Glu Ala Glu Thr Thr Thr Ala Ser Gly Leu Val Ile Pro Asp
 20 25 30
 Thr Ala Lys Glu Lys Pro Gln Glu Gly Thr Val Val Ala Val Gly Pro
 35 40 45
 Gly Arg Trp Asp Glu Asp Gly Glu Lys Arg Ile Pro Leu Asp Val Ala
 50 55 60
 Glu Gly Asp Thr Val Ile Tyr Ser Lys Tyr Gly Gly Thr Glu Ile Lys
 65 70 75 80
 Tyr Asn Gly Glu Glu Tyr Leu Ile Leu Ser Ala Arg Asp Val Leu Ala
 85 90 95
 Val Val Ser Lys
 100

<210> 273

<211> 408

<212> PRT

<213> Mycobacterium tuberculosis

<400> 273

Val Lys Arg Phe Trp Glu Asn Val Gly Lys Pro Asn Asp Thr Thr Asp
 1 5 10 15
 Gly Arg Gly Thr Thr Ser Leu Ala Met Thr Pro Ile Ser Gln Thr Pro
 20 25 30
 Gly Leu Leu Ala Glu Ala Met Val Asp Leu Gly Ala Ile Glu His Asn
 35 40 45
 Val Arg Val Leu Arg Glu His Ala Gly His Ala Gln Leu Met Ala Val
 50 55 60
 Val Lys Ala Asp Gly Tyr Gly His Gly Ala Thr Arg Val Ala Gln Thr
 65 70 75 80
 Ala Leu Gly Ala Gly Ala Ala Glu Leu Gly Val Ala Thr Val Asp Glu
 85 90 95
 Ala Leu Ala Leu Arg Ala Asp Gly Ile Thr Ala Pro Val Leu Ala Trp
 100 105 110
 Leu His Pro Pro Gly Ile Asp Phe Gly Pro Ala Leu Leu Ala Asp Val
 115 120 125
 Gln Val Ala Val Ser Ser Leu Arg Gln Leu Asp Glu Leu Leu His Ala
 130 135 140
 Val Arg Arg Thr Gly Arg Thr Ala Thr Val Thr Val Lys Val Asp Thr
 145 150 155 160
 Gly Leu Asn Arg Asn Gly Val Gly Pro Ala Gln Phe Pro Ala Met Leu

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      165      170      175
Thr Ala Leu Arg Gln Ala Met Ala Glu Asp Ala Val Arg Leu Arg Gly
      180      185      190
Leu Met Ser His Met Val Tyr Ala Asp Lys Pro Asp Asp Ser Ile Asn
      195      200      205
Asp Val Gln Ala Gln Arg Phe Thr Ala Phe Leu Ala Gln Ala Arg Glu
      210      215      220
Gln Gly Val Arg Phe Glu Val Ala His Leu Ser Asn Ser Ser Ala Thr
      225      230      235
Met Ala Arg Pro Asp Leu Thr Phe Asp Leu Val Arg Pro Gly Ile Ala
      245      250      255
Val Tyr Gly Leu Ser Pro Val Pro Ala Leu Gly Asp Met Gly Leu Val
      260      265      270
Pro Ala Met Thr Val Lys Cys Ala Val Ala Leu Val Lys Ser Ile Arg
      275      280      285
Ala Gly Glu Gly Val Ser Tyr Gly His Thr Trp Ile Ala Pro Arg Asp
      290      295      300
Thr Asn Leu Ala Leu Leu Pro Ile Gly Tyr Ala Asp Gly Val Phe Arg
      305      310      315
Ser Leu Gly Gly Arg Leu Glu Val Leu Ile Asn Gly Arg Arg Cys Pro
      325      330      335
Gly Val Gly Arg Ile Cys Met Asp Gln Phe Met Val Asp Leu Gly Pro
      340      345      350
Gly Pro Leu Asp Val Ala Glu Gly Asp Glu Ala Ile Leu Phe Gly Pro
      355      360      365
Gly Ile Arg Gly Glu Pro Thr Ala Gln Asp Trp Ala Asp Leu Val Gly
      370      375      380
Thr Ile His Tyr Glu Val Val Thr Ser Pro Arg Gly Arg Ile Thr Arg
      385      390      395
Thr Tyr Arg Glu Ala Glu Asn Arg
      405

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<210> 274

<211> 500

<212> PRT

<213> Mycobacterium tuberculosis

<400> 274

```

Met Ala Pro Ser Gly Gly Gln Glu Ala Gln Ile Cys Asp Ser Glu Thr
1      5      10      15
Phe Gly Asp Ser Asp Phe Val Val Val Ala Asn Arg Leu Pro Val Asp
      20      25      30
Leu Glu Arg Leu Pro Asp Gly Ser Thr Thr Trp Lys Arg Ser Pro Gly
      35      40      45
Gly Leu Val Thr Ala Leu Glu Pro Val Leu Arg Arg Arg Arg Gly Ala
      50      55      60
Trp Val Gly Trp Pro Gly Val Asn Asp Asp Gly Ala Glu Pro Asp Leu
      65      70      75      80
His Val Leu Asp Gly Pro Ile Ile Gln Asp Glu Leu Glu Leu His Pro
      85      90      95
Val Arg Leu Ser Thr Thr Asp Ile Ala Gln Tyr Tyr Glu Gly Phe Ser
      100      105      110
Asn Ala Thr Leu Trp Pro Leu Tyr His Asp Val Ile Val Lys Pro Leu
      115      120      125
Tyr His Arg Glu Trp Trp Asp Arg Tyr Val Asp Val Asn Gln Arg Phe
      130      135      140
Ala Glu Ala Ala Ser Arg Ala Ala Ala His Gly Ala Thr Val Trp Val

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145          150          155          160
Gln Asp Tyr Gln Leu Gln Leu Val Pro Lys Met Leu Arg Met Leu Arg
          165          170          175
Pro Asp Leu Thr Ile Gly Phe Phe Leu His Ile Pro Phe Pro Pro Val
          180          185          190
Glu Leu Phe Met Gln Met Pro Trp Arg Thr Glu Ile Ile Gln Gly Leu
          195          200          205
Leu Gly Ala Asp Leu Val Gly Phe His Leu Pro Gly Gly Ala Gln Asn
          210          215          220
Phe Leu Ile Leu Ser Arg Arg Leu Val Gly Thr Asp Thr Ser Arg Gly
225          230          235          240
Thr Val Gly Val Arg Ser Arg Phe Gly Ala Ala Val Leu Gly Ser Arg
          245          250          255
Thr Ile Arg Val Gly Ala Phe Pro Ile Ser Val Asp Ser Gly Ala Leu
          260          265          270
Asp His Ala Ala Arg Asp Arg Asn Ile Arg Arg Arg Ala Arg Glu Ile
          275          280          285
Arg Thr Glu Leu Gly Asn Pro Arg Lys Ile Leu Leu Gly Val Asp Arg
          290          295          300
Leu Asp Tyr Thr Lys Gly Ile Asp Val Arg Leu Lys Ala Phe Ser Glu
305          310          315          320
Leu Leu Ala Glu Gly Arg Val Lys Arg Asp Asp Thr Val Val Val Gln
          325          330          335
Leu Ala Thr Pro Ser Arg Glu Arg Val Glu Ser Tyr Gln Thr Leu Arg
          340          345          350
Asn Asp Ile Glu Arg Gln Val Gly His Ile Asn Gly Glu Tyr Gly Glu
          355          360          365
Val Gly His Pro Val Val His Tyr Leu His Arg Pro Ala Pro Arg Asp
          370          375          380
Glu Leu Ile Ala Phe Phe Val Ala Ser Asp Val Met Leu Val Thr Pro
385          390          395          400
Leu Arg Asp Gly Met Asn Leu Val Ala Lys Glu Tyr Val Ala Cys Arg
          405          410          415
Ser Asp Leu Gly Gly Ala Leu Val Leu Ser Glu Phe Thr Gly Ala Ala
          420          425          430
Ala Glu Leu Arg His Ala Tyr Leu Val Asn Pro His Asp Leu Glu Gly
          435          440          445
Val Lys Asp Gly Ile Glu Glu Ala Leu Asn Gln Thr Glu Glu Ala Gly
          450          455          460
Arg Arg Arg Met Arg Ser Leu Arg Arg Gln Val Leu Ala His Asp Val
465          470          475          480
Asp Arg Trp Ala Gln Ser Phe Leu Asp Ala Leu Ala Gly Ala His Pro
          485          490          495
Arg Gly Gln Gly
          500

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<210> 275

<211> 505

<212> PRT

<213> Mycobacterium tuberculosis

<400> 275

```

Val Ser Ala Ala Asp Thr Ala Glu Asp Leu Pro Glu Gln Phe Arg Ile
1          5          10          15
Arg Arg Asp Lys Arg Ala Arg Leu Leu Ala Gln Gly Arg Asp Pro Tyr
20          25          30
Pro Val Ala Val Pro Arg Thr His Thr Leu Ala Glu Val Arg Ala Ala

```

	35				40				45						
His	Pro	Asp	Leu	Pro	Ile	Asp	Thr	Ala	Thr	Glu	Asp	Ile	Val	Gly	Val
	50					55					60				
Ala	Gly	Arg	Val	Ile	Phe	Ala	Arg	Asn	Ser	Gly	Lys	Leu	Cys	Phe	Ala
65					70					75					80
Thr	Leu	Gln	Asp	Gly	Asp	Gly	Thr	Gln	Leu	Gln	Val	Met	Ile	Ser	Leu
				85					90					95	
Asp	Lys	Val	Gly	Gln	Ala	Ala	Leu	Asp	Ala	Trp	Lys	Ala	Asp	Val	Asp
			100					105					110		
Leu	Gly	Asp	Ile	Val	Tyr	Val	His	Gly	Ala	Val	Ile	Ser	Ser	Arg	Arg
		115					120					125			
Gly	Glu	Leu	Ser	Val	Leu	Ala	Asp	Cys	Trp	Arg	Ile	Ala	Ala	Lys	Ser
	130					135					140				
Leu	Arg	Pro	Leu	Pro	Val	Ala	His	Lys	Glu	Met	Ser	Glu	Glu	Ser	Arg
145					150					155					160
Val	Arg	Gln	Arg	Tyr	Val	Asp	Leu	Ile	Val	Arg	Pro	Glu	Ala	Arg	Ala
				165					170					175	
Val	Ala	Arg	Leu	Arg	Ile	Ala	Val	Val	Arg	Ala	Ile	Arg	Thr	Ala	Leu
			180					185					190		
Gln	Arg	Arg	Gly	Phe	Leu	Glu	Val	Glu	Thr	Pro	Val	Leu	Gln	Thr	Leu
		195					200					205			
Ala	Gly	Gly	Ala	Ala	Ala	Arg	Pro	Phe	Ala	Thr	His	Ser	Asn	Ala	Leu
	210					215					220				
Asp	Ile	Asp	Leu	Tyr	Leu	Arg	Ile	Ala	Pro	Glu	Leu	Phe	Leu	Lys	Arg
225					230					235					240
Cys	Ile	Val	Gly	Gly	Phe	Asp	Lys	Val	Phe	Glu	Leu	Asn	Arg	Val	Phe
				245					250					255	
Arg	Asn	Glu	Gly	Ala	Asp	Ser	Thr	His	Ser	Pro	Glu	Phe	Ser	Met	Leu
			260					265					270		
Glu	Thr	Tyr	Gln	Thr	Tyr	Gly	Thr	Tyr	Asp	Asp	Ser	Ala	Val	Val	Thr
		275					280					285			
Arg	Glu	Leu	Ile	Gln	Glu	Val	Ala	Asp	Glu	Ala	Ile	Gly	Thr	Arg	Gln
	290					295					300				
Leu	Pro	Leu	Pro	Asp	Gly	Ser	Val	Tyr	Asp	Ile	Asp	Gly	Glu	Trp	Ala
305					310					315					320
Thr	Ile	Gln	Met	Tyr	Pro	Ser	Leu	Ser	Val	Ala	Leu	Gly	Glu	Glu	Ile
				325					330					335	
Thr	Pro	Gln	Thr	Thr	Val	Asp	Arg	Leu	Arg	Gly	Ile	Ala	Asp	Ser	Leu
			340					345					350		
Gly	Leu	Glu	Lys	Asp	Pro	Ala	Ile	His	Asp	Asn	Arg	Gly	Phe	Gly	His
		355					360					365			
Gly	Lys	Leu	Ile	Glu	Glu	Leu	Trp	Glu	Arg	Thr	Val	Gly	Lys	Ser	Leu
	370					375					380				
Ser	Ala	Pro	Thr	Phe	Val	Lys	Asp	Phe	Pro	Val	Gln	Thr	Thr	Pro	Leu
385					390										

Phe Pro Ile Val Arg Pro His Ser Asn
 500 505

<210> 276

<211> 272

<212> PRT

<213> Mycobacterium tuberculosis

<400> 276

Val	Leu	Leu	Ala	Ile	Asp	Val	Arg	Asn	Thr	His	Thr	Val	Val	Gly	Leu
1				5					10					15	
Leu	Ser	Gly	Met	Lys	Glu	His	Ala	Lys	Val	Val	Gln	Gln	Trp	Arg	Ile
			20					25					30		
Arg	Thr	Glu	Ser	Glu	Val	Thr	Ala	Asp	Glu	Leu	Ala	Leu	Thr	Ile	Asp
		35					40					45			
Gly	Leu	Ile	Gly	Glu	Asp	Ser	Glu	Arg	Leu	Thr	Gly	Thr	Ala	Ala	Leu
	50					55					60				
Ser	Thr	Val	Pro	Ser	Val	Leu	His	Glu	Val	Arg	Ile	Met	Leu	Asp	Gln
65					70					75					80
Tyr	Trp	Pro	Ser	Val	Pro	His	Val	Leu	Ile	Glu	Pro	Gly	Val	Arg	Thr
				85					90					95	
Gly	Ile	Pro	Leu	Leu	Val	Asp	Asn	Pro	Lys	Glu	Val	Gly	Ala	Asp	Arg
		100						105					110		
Ile	Val	Asn	Cys	Leu	Ala	Ala	Tyr	Asp	Arg	Phe	Arg	Lys	Ala	Ala	Ile
		115					120					125			
Val	Val	Asp	Phe	Gly	Ser	Ser	Ile	Cys	Val	Asp	Val	Val	Ser	Ala	Lys
	130					135					140				
Gly	Glu	Phe	Leu	Gly	Gly	Ala	Ile	Ala	Pro	Gly	Val	Gln	Val	Ser	Ser
145					150					155					160
Asp	Ala	Ala	Ala	Ala	Arg	Ser	Ala	Ala	Leu	Arg	Arg	Val	Glu	Leu	Ala
				165					170					175	
Arg	Pro	Arg	Ser	Val	Val	Gly	Lys	Asn	Thr	Val	Glu	Cys	Met	Gln	Ala
			180					185					190		
Gly	Ala	Val	Phe	Gly	Phe	Ala	Gly	Leu	Val	Asp	Gly	Leu	Val	Gly	Arg
		195					200					205			
Ile	Arg	Glu	Asp	Val	Ser	Gly	Phe	Ser	Val	Asp	His	Asp	Val	Ala	Ile
	210					215					220				
Val	Ala	Thr	Gly	His	Thr	Ala	Pro	Leu	Leu	Leu	Pro	Glu	Leu	His	Thr
225					230					235					240
Val	Asp	His	Tyr	Asp	Gln	His	Leu	Thr	Leu	Gln	Gly	Leu	Arg	Leu	Val
				245					250					255	
Phe	Glu	Arg	Asn	Leu	Glu	Val	Gln	Arg	Gly	Arg	Leu	Lys	Thr	Ala	Arg
			260					265					270		

<210> 277

<211> 188

<212> PRT

<213> Mycobacterium tuberculosis

<400> 277

Met	Thr	Arg	Val	Val	Leu	Ser	Val	Gly	Ser	Asn	Leu	Gly	Asp	Arg	Leu
1				5					10					15	
Ala	Arg	Leu	Arg	Ser	Val	Ala	Asp	Gly	Leu	Gly	Asp	Ala	Leu	Ile	Ala
			20					25					30		
Ala	Ser	Pro	Ile	Tyr	Glu	Ala	Asp	Pro	Trp	Gly	Gly	Val	Glu	Gln	Gly
		35					40					45			
Gln	Phe	Leu	Asn	Ala	Val	Leu	Ile	Ala	Asp	Asp	Pro	Thr	Cys	Glu	Pro

50		55		60
Arg Glu Trp Leu Arg Arg Ala Gln Glu Phe Glu Arg Ala Ala Gly Arg				
65		70		75
Val Arg Gly Gln Arg Trp Gly Pro Arg Asn Leu Asp Val Asp Leu Ile				80
	85		90	95
Ala Cys Tyr Gln Thr Ser Ala Thr Glu Ala Leu Val Glu Val Thr Ala				
	100		105	110
Arg Glu Asn His Leu Thr Leu Pro His Pro Leu Ala His Leu Arg Ala				
	115		120	125
Phe Val Leu Ile Pro Trp Ile Ala Val Asp Pro Thr Ala Gln Leu Thr				
	130		135	140
Val Ala Gly Cys Pro Arg Pro Val Thr Arg Leu Leu Ala Glu Leu Glu				
145		150		155
Pro Ala Asp Arg Asp Ser Val Arg Leu Phe Arg Pro Ser Phe Asp Leu				
	165		170	175
Asn Ser Arg His Pro Val Ser Arg Ala Pro Glu Ser				
	180		185	

<210> 278

<211> 280

<212> PRT

<213> Mycobacterium tuberculosis

<400> 278

Val Ser Pro Ala Pro Val Gln Val Met Gly Val Leu Asn Val Thr Asp				
1	5		10	15
Asp Ser Phe Ser Asp Gly Gly Cys Tyr Leu Asp Leu Asp Asp Ala Val				
	20		25	30
Lys His Gly Leu Ala Met Ala Ala Ala Gly Ala Gly Ile Val Asp Val				
	35		40	45
Gly Gly Glu Ser Ser Arg Pro Gly Ala Thr Arg Val Asp Pro Ala Val				
	50		55	60
Glu Thr Ser Arg Val Ile Pro Val Val Lys Glu Leu Ala Ala Gln Gly				
65		70		75
Ile Thr Val Ser Ile Asp Thr Met Arg Ala Asp Val Ala Arg Ala Ala				
	85		90	95
Leu Gln Asn Gly Ala Gln Met Val Asn Asp Val Ser Gly Gly Arg Ala				
	100		105	110
Asp Pro Ala Met Gly Pro Leu Leu Ala Glu Ala Asp Val Pro Trp Val				
	115		120	125
Leu Met His Trp Arg Ala Val Ser Ala Asp Thr Pro His Val Pro Val				
	130		135	140
Arg Tyr Gly Asn Val Val Ala Glu Val Arg Ala Asp Leu Leu Ala Ser				
145		150		155
Val Ala Asp Ala Val Ala Ala Gly Val Asp Pro Ala Arg Leu Val Leu				
	165		170	175
Asp Pro Gly Leu Gly Phe Ala Lys Thr Ala Gln His Asn Trp Ala Ile				
	180		185	190
Leu His Ala Leu Pro Glu Leu Val Ala Thr Gly Ile Pro Val Leu Val				
	195		200	205
Gly Ala Ser Arg Lys Arg Phe Leu Gly Ala Leu Leu Ala Gly Pro Asp				
	210		215	220
Gly Val Met Arg Pro Thr Asp Gly Arg Asp Thr Ala Thr Ala Val Ile				
225		230		235
Ser Ala Leu Ala Ala Leu His Gly Ala Trp Gly Val Arg Val His Asp				
	245		250	255
Val Arg Ala Ser Val Asp Ala Ile Lys Val Val Glu Ala Trp Met Gly				

260 265 270
 Ala Glu Arg Ile Glu Arg Asp Gly
 275 280

<210> 279

<211> 202

<212> PRT

<213> Mycobacterium tuberculosis

<400> 279

Met Ser Gln Leu Asp Ser Arg Ser Ala Ser Ala Arg Ile Arg Val Phe
 1 5 10 15
 Asp Gln Gln Arg Ala Glu Ala Ala Val Arg Glu Leu Leu Tyr Ala Ile
 20 25 30
 Gly Glu Asp Pro Asp Arg Asp Gly Leu Val Ala Thr Pro Ser Arg Val
 35 40 45
 Ala Arg Ser Tyr Arg Glu Met Phe Ala Gly Leu Tyr Thr Asp Pro Asp
 50 55 60
 Ser Val Leu Asn Thr Met Phe Asp Glu Asp His Asp Glu Leu Val Leu
 65 70 75 80
 Val Lys Glu Ile Pro Met Tyr Ser Thr Cys Glu His His Leu Val Ala
 85 90 95
 Phe His Gly Val Ala His Val Gly Tyr Ile Pro Gly Asp Asp Gly Arg
 100 105 110
 Val Thr Gly Leu Ser Lys Ile Ala Arg Leu Val Asp Leu Tyr Ala Lys
 115 120 125
 Arg Pro Gln Val Gln Glu Arg Leu Thr Ser Gln Ile Ala Asp Ala Leu
 130 135 140
 Met Lys Lys Leu Asp Pro Arg Gly Val Ile Val Val Ile Glu Ala Glu
 145 150 155 160
 His Leu Cys Met Ala Met Arg Gly Val Arg Lys Pro Gly Ser Val Thr
 165 170 175
 Thr Thr Ser Ala Val Arg Gly Leu Phe Lys Thr Asn Ala Ala Ser Arg
 180 185 190
 Ala Glu Ala Leu Asp Leu Ile Leu Arg Lys
 195 200

<210> 280

<211> 397

<212> PRT

<213> Mycobacterium tuberculosis

<400> 280

Met Thr Pro Ser Gln Trp Leu Asp Ile Ala Val Leu Ala Val Ala Phe
 1 5 10 15
 Ile Ala Ala Ile Ser Gly Trp Arg Ala Gly Ala Leu Gly Ser Met Leu
 20 25 30
 Ser Phe Gly Gly Val Leu Leu Gly Ala Thr Ala Gly Val Leu Leu Ala
 35 40 45
 Pro His Ile Val Ser Gln Ile Ser Ala Pro Arg Ala Lys Leu Phe Ala
 50 55 60
 Ala Leu Phe Leu Ile Leu Ala Leu Val Val Val Gly Glu Val Ala Gly
 65 70 75 80
 Val Val Leu Gly Arg Ala Val Arg Gly Ala Ile Arg Asn Arg Pro Ile
 85 90 95
 Arg Leu Ile Asp Ser Val Ile Gly Val Gly Val Gln Leu Val Val Val
 100 105 110

Leu Thr Ala Ala Trp Leu Leu Ala Met Pro Leu Thr Gln Ser Lys Glu
 115 120 125
 Gln Pro Glu Leu Ala Ala Ala Val Lys Gly Ser Arg Val Leu Ala Arg
 130 135 140
 Val Asn Glu Ala Ala Pro Thr Trp Leu Lys Thr Val Pro Lys Arg Leu
 145 150 155 160
 Ser Ala Leu Leu Asn Thr Ser Gly Leu Pro Ala Val Leu Glu Pro Phe
 165 170 175
 Ser Arg Thr Pro Val Ile Pro Val Ala Ser Pro Asp Pro Ala Leu Val
 180 185 190
 Asn Asn Pro Val Val Ala Ala Thr Glu Pro Ser Val Val Lys Ile Arg
 195 200 205
 Ser Leu Ala Pro Arg Cys Gln Lys Val Leu Glu Gly Thr Gly Phe Val
 210 215 220
 Ile Ser Pro Asp Arg Val Met Thr Asn Ala His Val Val Ala Gly Ser
 225 230 235 240
 Asn Asn Val Thr Val Tyr Ala Gly Asp Lys Pro Phe Glu Ala Thr Val
 245 250 255
 Val Ser Tyr Asp Pro Ser Val Asp Val Ala Ile Leu Ala Val Pro His
 260 265 270
 Leu Pro Pro Pro Pro Leu Val Phe Ala Ala Glu Pro Ala Lys Thr Gly
 275 280 285
 Ala Asp Val Val Val Leu Gly Tyr Pro Gly Gly Gly Asn Phe Thr Ala
 290 295 300
 Thr Pro Ala Arg Ile Arg Glu Ala Ile Arg Leu Ser Gly Pro Asp Ile
 305 310 315 320
 Tyr Gly Asp Pro Glu Pro Val Thr Arg Asp Val Tyr Thr Ile Arg Ala
 325 330 335
 Asp Val Glu Gln Gly Asp Ser Gly Gly Pro Leu Ile Asp Leu Asn Gly
 340 345 350
 Gln Val Leu Gly Val Val Phe Gly Ala Ala Ile Asp Asp Ala Glu Thr
 355 360 365
 Gly Phe Val Leu Thr Ala Gly Glu Val Ala Gly Gln Leu Ala Lys Ile
 370 375 380
 Gly Ala Thr Gln Pro Val Gly Thr Gly Ala Cys Val Ser
 385 390 395

<210> 281

<211> 810

<212> PRT

<213> Mycobacterium tuberculosis

<400> 281

Met Pro Glu Arg Leu Pro Ala Ala Ile Thr Val Leu Lys Leu Ala Gly
 1 5 10 15
 Cys Cys Leu Leu Ala Ser Val Val Ala Thr Ala Leu Thr Phe Pro Phe
 20 25 30
 Ala Gly Gly Leu Gly Leu Met Ser Asn Arg Ala Ser Glu Val Val Ala
 35 40 45
 Asn Gly Ser Ala Gln Leu Leu Glu Gly Gln Val Pro Ala Val Ser Thr
 50 55 60
 Met Val Asp Ala Lys Gly Asn Thr Ile Ala Trp Leu Tyr Ser Gln Arg
 65 70 75 80
 Arg Phe Glu Val Pro Ser Asp Lys Ile Ala Asn Thr Met Lys Leu Ala
 85 90 95
 Ile Val Ser Ile Glu Asp Lys Arg Phe Ala Asp His Ser Gly Val Asp
 100 105 110

Trp	Lys	Gly	Thr	Leu	Thr	Gly	Leu	Ala	Gly	Tyr	Ala	Ser	Gly	Asp	Leu	115	120	125
Asp	Thr	Arg	Gly	Gly	Ser	Thr	Leu	Glu	Gln	Gln	Tyr	Val	Lys	Asn	Tyr	130	135	140
Gln	Leu	Leu	Val	Thr	Ala	Gln	Thr	Asp	Ala	Glu	Lys	Arg	Ala	Ala	Val	145	150	155
Glu	Thr	Thr	Pro	Ala	Arg	Lys	Leu	Arg	Glu	Ile	Arg	Met	Ala	Leu	Thr	165	170	175
Leu	Asp	Lys	Thr	Phe	Thr	Lys	Ser	Glu	Ile	Leu	Thr	Arg	Tyr	Leu	Asn	180	185	190
Leu	Val	Ser	Phe	Gly	Asn	Asn	Ser	Phe	Gly	Val	Gln	Asp	Ala	Ala	Gln	195	200	205
Thr	Tyr	Phe	Gly	Ile	Asn	Ala	Ser	Asp	Leu	Asn	Trp	Gln	Gln	Ala	Ala	210	215	220
Leu	Leu	Ala	Gly	Met	Val	Gln	Ser	Thr	Ser	Thr	Leu	Asn	Pro	Tyr	Thr	225	230	235
Asn	Pro	Asp	Gly	Ala	Leu	Ala	Arg	Arg	Asn	Val	Val	Leu	Asp	Thr	Met	245	250	255
Ile	Glu	Asn	Leu	Pro	Gly	Glu	Ala	Glu	Ala	Leu	Arg	Ala	Ala	Lys	Ala	260	265	270
Glu	Pro	Leu	Gly	Val	Leu	Pro	Gln	Pro	Asn	Glu	Leu	Pro	Arg	Gly	Cys	275	280	285
Ile	Ala	Ala	Gly	Asp	Arg	Ala	Phe	Phe	Cys	Asp	Tyr	Val	Gln	Glu	Tyr	290	295	300
Leu	Ser	Arg	Ala	Gly	Ile	Ser	Lys	Glu	Gln	Val	Ala	Thr	Gly	Gly	Tyr	305	310	315
Leu	Ile	Arg	Thr	Thr	Leu	Asp	Pro	Glu	Val	Gln	Ala	Pro	Val	Lys	Ala	325	330	335
Ala	Ile	Asp	Lys	Tyr	Ala	Ser	Pro	Asn	Leu	Ala	Gly	Ile	Ser	Ser	Val	340	345	350
Met	Ser	Val	Ile	Lys	Pro	Gly	Lys	Asp	Ala	His	Lys	Val	Leu	Ala	Met	355	360	365
Ala	Ser	Asn	Arg	Lys	Tyr	Gly	Leu	Asp	Leu	Glu	Ala	Gly	Glu	Thr	Met	370	375	380
Arg	Pro	Gln	Pro	Phe	Ser	Leu	Val	Gly	Asp	Gly	Ala	Gly	Ser	Ile	Phe	385	390	395
Lys	Ile	Phe	Thr	Thr	Ala	Ala	Ala	Leu	Asp	Met	Gly	Met	Gly	Ile	Asn	405	410	415
Ala	Gln	Leu	Asp	Val	Pro	Pro	Arg	Phe	Gln	Ala	Lys	Gly	Leu	Gly	Ser	420	425	430
Gly	Gly	Ala	Lys	Gly	Cys	Pro	Lys	Glu	Thr	Trp	Cys	Val	Val	Asn	Ala	435	440	445
Gly	Asn	Tyr	Arg	Gly	Ser	Met	Asn	Val	Thr	Asp	Ala	Leu	Ala	Thr	Ser	450	455	460
Pro	Asn	Thr	Ala	Phe	Ala	Lys	Leu	Ile	Ser	Gln	Val	Gly	Val	Gly	Arg	465	470	475
Ala	Val	Asp	Met	Ala	Ile	Lys	Leu	Gly	Leu	Arg	Ser	Tyr	Ala	Asn	Pro	485	490	495
Gly	Thr	Ala	Arg	Asp	Tyr	Asn	Pro	Asp	Ser	Asn	Glu	Ser	Leu	Ala	Asp	500	505	510
Phe	Val	Lys	Arg	Gln	Asn	Leu	Gly	Ser	Phe	Thr	Leu	Gly	Pro	Ile	Glu	515	520	525
Leu	Asn	Ala	Leu	Glu	Leu	Ser	Asn	Val	Ala	Ala	Thr	Leu	Ala	Ser	Gly	530	535	540
Gly	Val	Trp	Cys	Pro	Pro	Asn	Pro	Ile	Asp	Gln	Leu	Ile	Asp	Arg	Asn	545	550	555
Gly	Asn	Glu	Val	Ala	Val	Thr	Thr	Glu	Thr	Cys	Asp	Gln	Val	Val	Pro	560		

				565					570					575			
Ala	Gly	Leu	Ala	Asn	Thr	Leu	Ala	Asn	Ala	Met	Ser	Lys	Asp	Ala	Val		
			580					585					590				
Gly	Ser	Gly	Thr	Ala	Ala	Gly	Ser	Ala	Gly	Ala	Ala	Gly	Trp	Asp	Leu		
		595						600				605					
Pro	Met	Ser	Gly	Lys	Thr	Gly	Thr	Thr	Glu	Ala	His	Arg	Ser	Ala	Gly		
	610					615					620						
Phe	Val	Gly	Phe	Thr	Asn	Arg	Tyr	Ala	Ala	Ala	Asn	Tyr	Ile	Tyr	Asp		
625					630					635					640		
Asp	Ser	Ser	Ser	Pro	Thr	Asp	Leu	Cys	Ser	Gly	Pro	Leu	Arg	His	Cys		
				645					650					655			
Gly	Ser	Gly	Asp	Leu	Tyr	Gly	Gly	Asn	Glu	Pro	Ser	Arg	Thr	Trp	Phe		
			660					665					670				
Ala	Ala	Met	Lys	Pro	Ile	Ala	Asn	Asn	Phe	Gly	Glu	Val	Gln	Leu	Pro		
		675					680					685					
Pro	Thr	Asp	Pro	Arg	Tyr	Val	Asp	Gly	Ala	Pro	Gly	Ser	Arg	Val	Pro		
	690					695					700						
Ser	Val	Ala	Gly	Leu	Asp	Val	Asp	Ala	Ala	Arg	Gln	Arg	Leu	Lys	Asp		
705					710					715					720		
Ala	Gly	Phe	Gln	Val	Ala	Asp	Gln	Thr	Asn	Ser	Val	Asn	Ser	Ser	Ala		
				725					730					735			
Lys	Tyr	Gly	Glu	Val	Val	Gly	Thr	Ser	Pro	Ser	Gly	Gln	Thr	Ile	Pro		
		740						745					750				
Gly	Ser	Ile	Val	Thr	Ile	Gln	Ile	Ser	Asn	Gly	Ile	Pro	Pro	Ala	Pro		
	755					760						765					
Pro	Pro	Pro	Pro	Leu	Pro	Glu	Asp	Gly	Gly	Pro	Pro	Pro	Pro	Val	Gly		
	770					775					780						
Ser	Gln	Val	Val	Glu	Ile	Pro	Gly	Leu	Pro	Pro	Ile	Thr	Ile	Pro	Leu		
785					790				795						800		
Leu	Ala	Pro	Pro	Pro	Pro	Ala	Pro	Pro	Pro								
				805					810								

<210> 282

<211> 578

<212> PRT

<213> Mycobacterium tuberculosis

<400> 282

Val	Ala	Leu	Tyr	Arg	Lys	Tyr	Arg	Pro	Ala	Ser	Phe	Ala	Glu	Val	Val		
1				5					10					15			
Gly	Gln	Glu	His	Val	Thr	Ala	Pro	Leu	Ser	Val	Ala	Leu	Asp	Ala	Gly		
			20					25					30				
Arg	Ile	Asn	His	Ala	Tyr	Leu	Phe	Ser	Gly	Pro	Arg	Gly	Cys	Gly	Lys		
		35					40					45					
Thr	Ser	Ser	Ala	Arg	Ile	Leu	Ala	Arg	Ser	Leu	Asn	Cys	Ala	Gln	Gly		
	50					55					60						
Pro	Thr	Ala	Asn	Pro	Cys	Gly	Val	Cys	Glu	Ser	Cys	Val	Ser	Leu	Ala		
65					70				75						80		
Pro	Asn	Ala	Pro	Gly	Ser	Ile	Asp	Val	Val	Glu	Leu	Asp	Ala	Ala	Ser		
				85					90					95			
His	Gly	Gly	Val	Asp	Asp	Thr	Arg	Glu	Leu	Arg	Asp	Arg	Ala	Phe	Tyr		
			100					105					110				
Ala	Pro	Val	Gln	Ser	Arg	Tyr	Arg	Val	Phe	Ile	Val	Asp	Glu	Ala	His		
		115					120						125				
Met	Val	Thr	Thr	Ala	Gly	Phe	Asn	Ala	Leu	Leu	Lys	Ile	Val	Glu	Glu		
	130					135					140						
Pro	Pro	Glu	His	Leu	Ile	Phe	Ile	Phe	Ala	Thr	Thr	Glu	Pro	Glu	Lys		

145					150					155				160	
Val	Leu	Pro	Thr	Ile	Arg	Ser	Arg	Thr	His	His	Tyr	Pro	Phe	Arg	Leu
				165					170					175	
Leu	Pro	Pro	Arg	Thr	Met	Arg	Ala	Leu	Leu	Ala	Arg	Ile	Cys	Glu	Gln
			180					185					190		
Glu	Gly	Val	Val	Val	Asp	Asp	Ala	Val	Tyr	Pro	Leu	Val	Ile	Arg	Ala
		195					200					205			
Gly	Gly	Gly	Ser	Pro	Arg	Asp	Thr	Leu	Ser	Val	Leu	Asp	Gln	Leu	Leu
	210					215					220				
Ala	Gly	Ala	Ala	Asp	Thr	His	Val	Thr	Tyr	Thr	Arg	Ala	Leu	Gly	Leu
225					230					235					240
Leu	Gly	Val	Thr	Asp	Val	Ala	Leu	Ile	Asp	Asp	Ala	Val	Asp	Ala	Leu
				245				250					255		
Ala	Ala	Cys	Asp	Ala	Ala	Ala	Leu	Phe	Gly	Ala	Ile	Glu	Ser	Val	Ile
			260					265					270		
Asp	Gly	Gly	His	Asp	Pro	Arg	Arg	Phe	Ala	Thr	Asp	Leu	Leu	Glu	Arg
	275						280					285			
Phe	Arg	Asp	Leu	Ile	Val	Leu	Gln	Ser	Val	Pro	Asp	Ala	Ala	Ser	Arg
	290					295					300				
Gly	Val	Val	Asp	Ala	Pro	Glu	Asp	Ala	Leu	Asp	Arg	Met	Arg	Glu	Gln
305					310					315					320
Ala	Ala	Arg	Ile	Gly	Arg	Ala	Thr	Leu	Thr	Arg	Tyr	Ala	Glu	Val	Val
			325						330					335	
Gln	Ala	Gly	Leu	Gly	Glu	Met	Arg	Gly	Ala	Thr	Ala	Pro	Arg	Leu	Leu
		340						345					350		
Leu	Glu	Val	Val	Cys	Ala	Arg	Leu	Leu	Leu	Pro	Ser	Ala	Ser	Asp	Ala
		355					360					365			
Glu	Ser	Ala	Leu	Leu	Gln	Arg	Val	Glu	Arg	Ile	Glu	Thr	Arg	Leu	Asp
	370					375					380				
Met	Ser	Ile	Pro	Ala	Pro	Gln	Ala	Val	Pro	Arg	Pro	Ser	Ala	Ala	Ala
385					390					395					400
Ala	Glu	Pro	Lys	His	Gln	Pro	Ala	Arg	Glu	Pro	Arg	Pro	Val	Leu	Ala
				405					410					415	
Pro	Thr	Pro	Ala	Ser	Ser	Glu	Pro	Thr	Val	Ala	Ala	Val	Arg	Ser	Met
			420					425					430		
Trp	Pro	Thr	Val	Arg	Asp	Lys	Val	Arg	Leu	Arg	Ser	Arg	Thr	Thr	Glu
	435						440					445			
Val	Met	Leu	Ala	Gly	Ala	Thr	Val	Arg	Ala	Leu	Glu	Asp	Asn	Thr	Leu
	450					455					460				
Val	Leu	Thr	His	Glu	Ser	Ala	Pro	Leu	Ala	Arg	Arg	Leu	Ser	Glu	Gln
465					470					475					480
Arg	Asn	Ala	Asp	Val	Leu	Ala	Glu	Ala	Leu	Lys	Asp	Ala	Leu	Gly	Val
			485					490					495		
Asn	Trp	Arg	Val	Arg	Cys	Glu	Thr	Gly	Glu	Pro	Ala	Ala	Ala	Ala	Ser
		500						505					510		
Pro	Val	Gly	Gly	Gly	Ala	Asn	Val	Ala	Thr	Ala	Lys	Ala	Val	Asn	Pro
		515					520					525			
Ala	Pro	Thr	Ala	Asn	Ser	Thr	Gln	Arg	Asp	Glu	Glu	Glu	His	Met	Leu
	530					535					540				
Ala	Glu	Ala	Gly	Arg	Gly	Asp	Pro	Ser	Pro	Arg	Arg	Asp	Pro	Glu	Glu
545					550					555					560
Val	Ala	Leu	Glu	Leu	Leu	Gln	Asn	Glu	Leu	Gly	Ala	Arg	Arg	Ile	Asp
				565					570					575	
Asn	Ala														

<211> 280
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 283
 Met Thr Phe Met Asp Ala Gln Ala Ser Phe Gln Thr Gln Ser Arg Thr
 1 5 10 15
 Leu Ala Arg Val Arg Gly Asp Leu Val Asp Gly Phe Arg Arg His Glu
 20 25 30
 Leu Trp Leu His Leu Gly Trp Gln Asp Ile Lys Gln Arg Tyr Arg Arg
 35 40 45
 Ser Val Leu Gly Pro Phe Trp Ile Thr Ile Ala Thr Gly Thr Thr Ala
 50 55 60
 Val Ala Met Gly Gly Leu Tyr Ser Lys Leu Phe Arg Leu Glu Leu Ser
 65 70 75 80
 Glu His Leu Pro Tyr Val Thr Leu Gly Leu Ile Val Trp Asn Leu Ile
 85 90 95
 Asn Ala Ala Ile Leu Asp Gly Ala Glu Val Phe Val Ala Asn Glu Gly
 100 105 110
 Leu Ile Lys Gln Leu Pro Ala Pro Leu Ser Val His Val Tyr Arg Leu
 115 120 125
 Val Trp Arg Gln Met Ile Phe Phe Ala His Asn Ile Val Ile Tyr Phe
 130 135 140
 Val Ile Ala Ile Ile Phe Pro Lys Pro Trp Ser Trp Ala Asp Leu Ser
 145 150 155 160
 Phe Leu Pro Ala Leu Ala Leu Ile Phe Leu Asn Cys Val Trp Val Ser
 165 170 175
 Leu Cys Phe Gly Ile Leu Ala Thr Arg Tyr Arg Asp Ile Gly Pro Leu
 180 185 190
 Leu Phe Ser Val Val Gln Leu Leu Phe Phe Met Thr Pro Ile Ile Trp
 195 200 205
 Asn Asp Glu Thr Leu Arg Arg Gln Gly Ala Gly Arg Trp Ser Ser Ile
 210 215 220
 Val Glu Leu Asn Pro Leu Leu His Tyr Leu Asp Ile Val Arg Ala Pro
 225 230 235 240
 Leu Leu Gly Ala His Gln Glu Leu Arg His Trp Leu Val Val Leu Val
 245 250 255
 Leu Thr Val Val Gly Trp Met Leu Ala Ala Phe Ala Met Arg Gln Tyr
 260 265 270
 Arg Ala Arg Val Pro Tyr Trp Val
 275 280

<210> 284
 <211> 121
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 284
 Met Arg Phe Val Val Thr Gly Gly Leu Ala Gly Ile Val Asp Phe Gly
 1 5 10 15
 Leu Tyr Val Val Leu Tyr Lys Val Ala Gly Leu Gln Val Asp Leu Ser
 20 25 30
 Lys Ala Ile Ser Phe Ile Val Gly Thr Ile Thr Ala Tyr Leu Ile Asn
 35 40 45
 Arg Arg Trp Thr Phe Gln Ala Glu Pro Ser Thr Ala Arg Phe Val Ala
 50 55 60
 Val Met Leu Leu Tyr Gly Ile Thr Phe Ala Val Gln Val Gly Leu Asn

65					70					75				80
His	Leu	Cys	Leu	Ala	Leu	Leu	His	Tyr	Arg	Ala	Trp	Ala	Ile	Pro Val
				85					90					95
Ala	Phe	Val	Ile	Ala	Gln	Gly	Thr	Ala	Thr	Val	Ile	Asn	Phe	Ile Val
			100					105					110	
Gln	Arg	Ala	Val	Ile	Phe	Arg	Ile	Arg						
		115					120							

<210> 285

<211> 461

<212> PRT

<213> Mycobacterium tuberculosis

<400> 285

Met	Leu	Ser	Val	Gly	Ala	Thr	Thr	Thr	Ala	Thr	Arg	Leu	Thr	Gly	Trp
1				5					10					15	
Gly	Arg	Thr	Ala	Pro	Ser	Val	Ala	Asn	Val	Leu	Arg	Thr	Pro	Asp	Ala
			20					25					30		
Glu	Met	Ile	Val	Lys	Ala	Val	Ala	Arg	Val	Ala	Glu	Ser	Gly	Gly	Gly
		35					40					45			
Arg	Gly	Ala	Ile	Ala	Arg	Gly	Leu	Gly	Arg	Ser	Tyr	Gly	Asp	Asn	Ala
	50					55					60				
Gln	Asn	Gly	Gly	Gly	Leu	Val	Ile	Asp	Met	Thr	Pro	Leu	Asn	Thr	Ile
65					70				75					80	
His	Ser	Ile	Asp	Ala	Asp	Thr	Lys	Leu	Val	Asp	Ile	Asp	Ala	Gly	Val
			85						90					95	
Asn	Leu	Asp	Gln	Leu	Met	Lys	Ala	Ala	Leu	Pro	Phe	Gly	Leu	Trp	Val
			100					105					110		
Pro	Val	Leu	Pro	Gly	Thr	Arg	Gln	Val	Thr	Val	Gly	Gly	Ala	Ile	Ala
		115					120					125			
Cys	Asp	Ile	His	Gly	Lys	Asn	His	His	Ser	Ala	Gly	Ser	Phe	Gly	Asn
	130					135					140				
His	Val	Arg	Ser	Met	Asp	Leu	Leu	Thr	Ala	Asp	Gly	Glu	Ile	Arg	His
145					150				155					160	
Leu	Thr	Pro	Thr	Gly	Glu	Asp	Ala	Glu	Leu	Phe	Trp	Ala	Thr	Val	Gly
			165					170					175		
Gly	Asn	Gly	Leu	Thr	Gly	Ile	Ile	Met	Arg	Ala	Thr	Ile	Glu	Met	Thr
		180						185					190		
Pro	Thr	Ser	Thr	Ala	Tyr	Phe	Ile	Ala	Asp	Gly	Asp	Val	Thr	Ala	Ser
	195						200					205			
Leu	Asp	Glu	Thr	Ile	Ala	Leu	His	Ser	Asp	Gly	Ser	Glu	Ala	Arg	Tyr
	210					215					220				
Thr	Tyr	Ser	Ser	Ala	Trp	Phe	Asp	Ala	Ile	Ser	Ala	Pro	Pro	Lys	Leu
225					230				235					240	
Gly	Arg	Ala	Ala	Val	Ser	Arg	Gly	Arg	Leu	Ala	Thr	Val	Glu	Gln	Leu
			245						250					255	
Pro	Ala	Lys	Leu	Arg	Ser	Glu	Pro	Leu	Lys	Phe	Asp	Ala	Pro	Gln	Leu
		260						265					270		
Leu	Thr	Leu	Pro	Asp	Val	Phe	Pro	Asn	Gly	Leu	Ala	Asn	Lys	Tyr	Thr
	275						280					285			
Phe	Gly	Pro	Ile	Gly	Glu	Leu	Trp	Tyr	Arg	Lys	Ser	Gly	Thr	Tyr	Arg
	290					295				300					
Gly	Lys	Val	Gln	Asn	Leu	Thr	Gln	Phe	Tyr	His	Pro	Leu	Asp	Met	Phe
305					310				315					320	
Gly	Glu	Trp	Asn	Arg	Ala	Tyr	Gly	Pro	Ala	Gly	Phe	Leu	Gln	Tyr	Gln
			325						330				335		
Phe	Val	Ile	Pro	Thr	Glu	Ala	Val	Asp	Glu	Phe	Lys	Lys	Ile	Ile	Gly

			340					345					350			
Val	Ile	Gln	Ala	Ser	Gly	His	Tyr	Ser	Phe	Leu	Asn	Val	Phe	Lys	Leu	
		355					360					365				
Phe	Gly	Pro	Arg	Asn	Gln	Ala	Pro	Leu	Ser	Phe	Pro	Ile	Pro	Gly	Trp	
	370					375					380					
Asn	Ile	Cys	Val	Asp	Phe	Pro	Ile	Lys	Asp	Gly	Leu	Gly	Lys	Phe	Val	
385					390					395					400	
Ser	Glu	Leu	Asp	Arg	Arg	Val	Leu	Glu	Phe	Gly	Gly	Arg	Leu	Tyr	Thr	
			405						410					415		
Ala	Lys	Asp	Ser	Arg	Thr	Thr	Ala	Glu	Thr	Phe	His	Ala	Met	Tyr	Pro	
		420					425					430				
Arg	Val	Asp	Glu	Trp	Ile	Ser	Val	Arg	Arg	Lys	Val	Asp	Pro	Leu	Arg	
		435					440				445					
Val	Phe	Ala	Ser	Asp	Met	Ala	Arg	Arg	Leu	Glu	Leu	Leu				
	450					455					460					

<210> 286

<211> 254

<212> PRT

<213> Mycobacterium tuberculosis

<400> 286

Met 1	Val	Leu	Asp	Ala 5	Val	Gly	Asn	Pro	Gln 10	Thr	Val	Leu	Leu	Leu 15	Gly
Gly	Thr	Ser	Glu	Ile	Gly	Leu	Ala	Ile	Cys	Glu	Arg	Tyr	Leu	His	Asn
			20				25						30		
Ser	Ala	Ala	Arg	Ile	Val	Leu	Ala	Cys	Leu	Pro	Asp	Asp	Pro	Arg	Arg
		35					40					45			
Glu	Asp	Ala	Ala	Ala	Ala	Met	Lys	Gln	Ala	Gly	Ala	Arg	Ser	Val	Glu
	50					55					60				
Leu	Ile	Asp	Phe	Asp	Ala	Leu	Asp	Thr	Asp	Ser	His	Pro	Lys	Met	Ile
65				70					75						80
Glu	Ala	Ala	Phe	Ser	Gly	Gly	Asp	Val	Asp	Val	Ala	Ile	Val	Ala	Phe
			85					90					95		
Gly	Leu	Leu	Gly	Asp	Ala	Glu	Glu	Leu	Trp	Gln	Asn	Gln	Arg	Lys	Ala
			100					105					110		
Val	Gln	Ile	Ala	Glu	Ile	Asn	Tyr	Thr	Ala	Ala	Val	Ser	Val	Gly	Val
		115					120					125			
Leu	Leu	Ala	Glu	Lys	Met	Arg	Ala	Gln	Gly	Phe	Gly	Gln	Ile	Ile	Ala
	130					135					140				
Met	Ser	Ser	Ala	Ala	Gly	Glu	Arg	Val	Arg	Arg	Ala	Asn	Phe	Val	Tyr
145				150					155						160
Gly	Ser	Thr	Lys	Ala	Gly	Leu	Asp	Gly	Phe	Tyr	Leu	Gly	Leu	Ser	Glu
			165					170					175		
Ala	Leu	Arg	Glu	Tyr	Gly	Val	Arg	Val	Leu	Val	Ile	Arg	Pro	Gly	Gln
			180				185						190		
Val	Arg	Thr	Arg	Met	Ser	Ala	His	Leu	Lys	Glu	Ala	Pro	Leu	Thr	Val
		195					200					205			
Asp	Lys	Glu	Tyr	Val	Ala	Asn	Leu	Ala	Val	Thr	Ala	Ser	Ala	Lys	Gly
	210					215					220				
Lys	Glu	Leu	Val	Trp	Ala	Pro	Ala	Ala	Phe	Arg	Tyr	Val	Met	Met	Val
225				230					235						240
Leu	Arg	His	Ile	Pro	Arg	Ser	Ile	Phe	Arg	Lys	Leu	Pro	Ile		
			245						250						

<210> 287

<211> 1094

<212> PRT

<213> Mycobacterium tuberculosis

<400> 287

Val	Pro	His	Asp	Gly	Asn	Glu	Arg	Ser	His	Arg	Ile	Ala	Arg	Leu	Ala
1				5					10					15	
Ala	Val	Val	Ser	Gly	Ile	Ala	Gly	Leu	Leu	Leu	Cys	Gly	Ile	Val	Pro
			20					25					30		
Leu	Leu	Pro	Val	Asn	Gln	Thr	Thr	Ala	Thr	Ile	Phe	Trp	Pro	Gln	Gly
			35				40					45			
Ser	Thr	Ala	Asp	Gly	Asn	Ile	Thr	Gln	Ile	Thr	Ala	Pro	Leu	Val	Ser
			50			55					60				
Gly	Ala	Pro	Arg	Ala	Leu	Asp	Ile	Ser	Ile	Pro	Cys	Ser	Ala	Ile	Ala
65					70					75				80	
Thr	Leu	Pro	Ala	Asn	Gly	Gly	Leu	Val	Leu	Ser	Thr	Leu	Pro	Ala	Gly
				85					90					95	
Gly	Val	Asp	Thr	Gly	Lys	Ala	Gly	Leu	Phe	Val	Arg	Ala	Asn	Gln	Asp
			100					105					110		
Thr	Val	Val	Val	Ala	Phe	Arg	Asp	Ser	Val	Ala	Ala	Val	Ala	Ala	Arg
			115				120					125			
Ser	Thr	Ile	Ala	Ala	Gly	Gly	Cys	Ser	Ala	Leu	His	Ile	Trp	Ala	Asp
			130			135					140				
Thr	Gly	Gly	Ala	Gly	Ala	Asp	Phe	Met	Gly	Ile	Pro	Gly	Gly	Ala	Gly
145					150					155				160	
Thr	Leu	Pro	Pro	Glu	Lys	Lys	Pro	Gln	Val	Gly	Gly	Ile	Phe	Thr	Asp
				165					170					175	
Leu	Lys	Val	Gly	Ala	Gln	Pro	Gly	Leu	Ser	Ala	Arg	Val	Asp	Ile	Asp
			180					185					190		
Thr	Arg	Phe	Ile	Thr	Thr	Pro	Gly	Ala	Leu	Lys	Lys	Ala	Val	Met	Leu
			195				200					205			
Leu	Gly	Val	Leu	Ala	Val	Leu	Val	Ala	Met	Val	Gly	Leu	Ala	Ala	Leu
			210				215				220				
Asp	Arg	Leu	Ser	Arg	Gly	Arg	Thr	Leu	Arg	Asp	Trp	Leu	Thr	Arg	Tyr
225					230					235				240	
Arg	Pro	Arg	Val	Arg	Val	Gly	Phe	Ala	Ser	Arg	Leu	Ala	Asp	Ala	Ala
				245					250					255	
Val	Ile	Ala	Thr	Leu	Leu	Leu	Trp	His	Val	Ile	Gly	Ala	Thr	Ser	Ser
			260					265					270		
Asp	Asp	Gly	Tyr	Leu	Leu	Thr	Val	Ala	Arg	Val	Ala	Pro	Lys	Ala	Gly
			275					280					285		
Tyr	Val	Ala	Asn	Tyr	Tyr	Arg	Tyr	Phe	Gly	Thr	Thr	Glu	Ala	Pro	Phe
			290				295					300			
Asp	Trp	Tyr	Thr	Ser	Val	Leu	Ala	Gln	Leu	Ala	Ala	Val	Ser	Thr	Ala
305					310					315				320	
Gly	Val	Trp	Met	Arg	Leu	Pro	Ala	Thr	Leu	Ala	Gly	Ile	Ala	Cys	Trp
				325					330					335	
Leu	Ile	Val	Ser	Arg	Phe	Val	Leu	Arg	Arg	Leu	Gly	Pro	Gly	Pro	Gly
			340					345					350		
Gly	Leu	Ala	Ser	Asn	Arg	Val	Ala	Val	Phe	Thr	Ala	Gly	Ala	Val	Phe
			355				360					365			
Leu	Ser	Ala	Trp	Leu	Pro	Phe	Asn	Asn	Gly	Leu	Arg	Pro	Glu	Pro	Leu
			370			375					380				
Ile	Ala	Leu	Gly	Val	Leu	Val	Thr	Trp	Val	Leu	Val	Glu	Arg	Ser	Ile
385					390					395				400	
Ala	Leu	Gly	Arg	Leu	Ala	Pro	Ala	Ala	Val	Ala	Ile	Ile	Val	Ala	Thr
				405					410					415	
Leu	Thr	Ala	Thr	Leu	Ala	Pro	Gln	Gly	Leu	Ile	Ala	Leu	Ala	Pro	Leu

			420					425					430			
Leu	Thr	Gly	Ala	Arg	Ala	Ile	Ala	Gln	Arg	Ile	Arg	Arg	Arg	Arg	Ala	
		435					440					445				
Thr	Asp	Gly	Leu	Leu	Ala	Pro	Leu	Ala	Val	Leu	Ala	Ala	Ala	Leu	Ser	
		450					455					460				
Leu	Ile	Thr	Val	Val	Val	Phe	Arg	Asp	Gln	Thr	Leu	Ala	Thr	Val	Ala	
465					470					475					480	
Glu	Ser	Ala	Arg	Ile	Lys	Tyr	Lys	Val	Gly	Pro	Thr	Ile	Ala	Trp	Tyr	
				485					490					495		
Gln	Asp	Phe	Leu	Arg	Tyr	Tyr	Phe	Leu	Thr	Val	Glu	Ser	Asn	Val	Glu	
			500					505					510			
Gly	Ser	Met	Ser	Arg	Arg	Phe	Ala	Val	Leu	Val	Leu	Leu	Phe	Cys	Leu	
		515					520					525				
Phe	Gly	Val	Leu	Phe	Val	Leu	Leu	Arg	Arg	Gly	Arg	Val	Ala	Gly	Leu	
		530				535					540					
Ala	Ser	Gly	Pro	Ala	Trp	Arg	Leu	Ile	Gly	Thr	Thr	Ala	Val	Gly	Leu	
545					550					555					560	
Leu	Leu	Leu	Thr	Phe	Thr	Pro	Thr	Lys	Trp	Ala	Val	Gln	Phe	Gly	Ala	
				565					570					575		
Phe	Ala	Gly	Leu	Ala	Gly	Val	Leu	Gly	Ala	Val	Thr	Ala	Phe	Thr	Phe	
			580					585					590			
Ala	Arg	Ile	Gly	Leu	His	Ser	Arg	Arg	Asn	Leu	Thr	Leu	Tyr	Val	Thr	
		595					600					605				
Ala	Leu	Leu	Phe	Val	Leu	Ala	Trp	Ala	Thr	Ser	Gly	Ile	Asn	Gly	Trp	
		610				615					620					
Phe	Tyr	Val	Gly	Asn	Tyr	Gly	Val	Pro	Trp	Tyr	Asp	Ile	Gln	Pro	Val	
625					630					635					640	
Ile	Ala	Ser	His	Pro	Val	Thr	Ser	Met	Phe	Leu	Thr	Leu	Ser	Ile	Leu	
				645					650					655		
Thr	Gly	Leu	Leu	Ala	Ala	Trp	Tyr	His	Phe	Arg	Met	Asp	Tyr	Ala	Gly	
			660					665				670				
His	Thr	Glu	Val	Lys	Asp	Asn	Arg	Arg	Asn	Arg	Ile	Leu	Ala	Ser	Thr	
		675					680					685				
Pro	Leu	Leu	Val	Val	Ala	Val	Ile	Met	Val	Ala	Gly	Glu	Val	Gly	Ser	
		690				695					700					
Met	Ala	Lys	Ala	Ala	Val	Phe	Arg	Tyr	Pro	Leu	Tyr	Thr	Thr	Ala	Lys	
705					710					715					720	
Ala	Asn	Leu	Thr	Ala	Leu	Ser	Thr	Gly	Leu	Ser	Ser	Cys	Ala	Met	Ala	
				725					730					735		
Asp	Asp	Val	Leu	Ala	Glu	Pro	Asp	Pro	Asn	Ala	Gly	Met	Leu	Gln	Pro	
			740					745				750				
Val	Pro	Gly	Gln	Ala	Phe	Gly	Pro	Asp	Gly	Pro	Leu	Gly	Gly	Ile	Ser	
		755				760					765					
Pro	Val	Gly	Phe	Lys	Pro	Glu	Gly	Val	Gly	Glu	Asp	Leu	Lys	Ser	Asp	

Lys Glu Asp Gly Asp Phe Ile Tyr Gly Gln Ser Leu Lys Leu Gln Trp
 885 890 895
 Gly Val Thr Gly Pro Asp Gly Arg Ile Gln Pro Leu Gly Gln Val Phe
 900 905 910
 Pro Ile Asp Ile Gly Pro Gln Pro Ala Trp Arg Asn Leu Arg Phe Pro
 915 920 925
 Leu Ala Trp Ala Pro Pro Glu Ala Asp Val Ala Arg Ile Val Ala Tyr
 930 935 940
 Asp Pro Asn Leu Ser Pro Glu Gln Trp Phe Ala Phe Thr Pro Pro Arg
 945 950 955 960
 Val Pro Val Leu Glu Ser Leu Gln Arg Leu Ile Gly Ser Ala Thr Pro
 965 970 975
 Val Leu Met Asp Ile Ala Thr Ala Ala Asn Phe Pro Cys Gln Arg Pro
 980 985 990
 Phe Ser Glu His Leu Gly Ile Ala Glu Leu Pro Gln Tyr Arg Ile Leu
 995 1000 1005
 Pro Asp His Lys Gln Thr Ala Ala Ser Ser Asn Leu Trp Gln Ser Ser
 1010 1015 1020
 Ser Thr Gly Gly Pro Phe Leu Phe Thr Gln Ala Leu Leu Arg Thr Ser
 1025 1030 1035 1040
 Thr Ile Ala Thr Tyr Leu Arg Gly Asp Trp Tyr Arg Asp Trp Gly Ser
 1045 1050 1055
 Val Glu Gln Tyr His Arg Leu Val Pro Ala Asp Gln Ala Pro Asp Ala
 1060 1065 1070
 Val Val Glu Gly Val Ile Thr Val Pro Gly Trp Gly Arg Pro Gly
 1075 1080 1085
 Pro Ile Arg Ala Leu Pro
 1090

<210> 288

<211> 1098

<212> PRT

<213> Mycobacterium tuberculosis

<400> 288

Met Thr Gln Cys Ala Ser Arg Arg Lys Ser Thr Pro Asn Arg Ala Ile
 1 5 10 15
 Leu Gly Ala Phe Ala Ser Ala Arg Gly Thr Arg Trp Val Ala Thr Ile
 20 25 30
 Ala Gly Leu Ile Gly Phe Val Leu Ser Val Ala Thr Pro Leu Leu Pro
 35 40 45
 Val Val Gln Thr Thr Ala Met Leu Asp Trp Pro Gln Arg Gly Gln Leu
 50 55 60
 Gly Ser Val Thr Ala Pro Leu Ile Ser Leu Thr Pro Val Asp Phe Thr
 65 70 75 80
 Ala Thr Val Pro Cys Asp Val Val Arg Ala Met Pro Pro Ala Gly Gly
 85 90 95
 Val Val Leu Gly Thr Ala Pro Lys Gln Gly Lys Asp Ala Asn Leu Gln
 100 105 110
 Ala Leu Phe Val Val Val Ser Ala Gln Arg Val Asp Val Thr Asp Arg
 115 120 125
 Asn Val Val Ile Leu Ser Val Pro Arg Glu Gln Val Thr Ser Pro Gln
 130 135 140
 Cys Gln Arg Ile Glu Val Thr Ser Thr His Ala Gly Thr Phe Ala Asn
 145 150 155 160
 Phe Val Gly Leu Lys Asp Pro Ser Gly Ala Pro Leu Arg Ser Gly Phe
 165 170 175

Pro Asp Pro Asn Leu Arg Pro Gln Ile Val Gly Val Phe Thr Asp Leu
 180 185 190
 Thr Gly Pro Ala Pro Pro Gly Leu Ala Val Ser Ala Thr Ile Asp Thr
 195 200 205
 Arg Phe Ser Thr Arg Pro Thr Thr Leu Lys Leu Leu Ala Ile Ile Gly
 210 215 220
 Ala Ile Val Ala Thr Val Val Ala Leu Ile Ala Leu Trp Arg Leu Asp
 225 230 235 240
 Gln Leu Asp Gly Arg Gly Ser Ile Ala Gln Leu Leu Leu Arg Pro Phe
 245 250 255
 Arg Pro Ala Ser Ser Pro Gly Gly Met Arg Arg Leu Ile Pro Ala Ser
 260 265 270
 Trp Arg Thr Phe Thr Leu Thr Asp Ala Val Val Ile Phe Gly Phe Leu
 275 280 285
 Leu Trp His Val Ile Gly Ala Asn Ser Ser Asp Asp Gly Tyr Ile Leu
 290 295 300
 Gly Met Ala Arg Val Ala Asp His Ala Gly Tyr Met Ser Asn Tyr Phe
 305 310 315 320
 Arg Trp Phe Gly Ser Pro Glu Asp Pro Phe Gly Trp Tyr Tyr Asn Leu
 325 330 335
 Leu Ala Leu Met Thr His Val Ser Asp Ala Ser Leu Trp Met Arg Leu
 340 345 350
 Pro Asp Leu Ala Ala Gly Leu Val Cys Trp Leu Leu Leu Ser Arg Glu
 355 360 365
 Val Leu Pro Arg Leu Gly Pro Ala Val Glu Ala Ser Lys Pro Ala Tyr
 370 375 380
 Trp Ala Ala Ala Met Val Leu Leu Thr Ala Trp Met Pro Phe Asn Asn
 385 390 395 400
 Gly Leu Arg Pro Glu Gly Ile Ile Ala Leu Gly Ser Leu Val Thr Tyr
 405 410 415
 Val Leu Ile Glu Arg Ser Met Arg Tyr Ser Arg Leu Thr Pro Ala Ala
 420 425 430
 Leu Ala Val Val Thr Ala Ala Phe Thr Leu Gly Val Gln Pro Thr Gly
 435 440 445
 Leu Ile Ala Val Ala Ala Leu Val Ala Gly Gly Arg Pro Met Leu Arg
 450 455 460
 Ile Leu Val Arg Arg His Arg Leu Val Gly Thr Leu Pro Leu Val Ser
 465 470 475 480
 Pro Met Leu Ala Ala Gly Thr Val Ile Leu Thr Val Val Phe Ala Asp
 485 490 495
 Gln Thr Leu Ser Thr Val Leu Glu Ala Thr Arg Val Arg Ala Lys Ile
 500 505 510
 Gly Pro Ser Gln Ala Trp Tyr Thr Glu Asn Leu Arg Tyr Tyr Tyr Leu
 515 520 525
 Ile Leu Pro Thr Val Asp Gly Ser Leu Ser Arg Arg Phe Gly Phe Leu
 530 535 540
 Ile Thr Ala Leu Cys Leu Phe Thr Ala Val Phe Ile Met Leu Arg Arg
 545 550 555 560
 Lys Arg Ile Pro Ser Val Ala Arg Gly Pro Ala Trp Arg Leu Met Gly
 565 570 575
 Val Ile Phe Gly Thr Met Phe Phe Leu Met Phe Thr Pro Thr Lys Trp
 580 585 590
 Val His His Phe Gly Leu Phe Ala Ala Val Gly Ala Ala Met Ala Ala
 595 600 605
 Leu Thr Thr Val Leu Val Ser Pro Ser Val Leu Arg Trp Ser Arg Asn
 610 615 620
 Arg Met Ala Phe Leu Ala Ala Leu Phe Phe Leu Leu Ala Leu Cys Trp

625				630					635				640		
Ala	Thr	Thr	Asn	Gly	Trp	Trp	Tyr	Val	Ser	Ser	Tyr	Gly	Val	Pro	Phe
				645					650					655	
Asn	Ser	Ala	Met	Pro	Lys	Ile	Asp	Gly	Ile	Thr	Val	Ser	Thr	Ile	Phe
			660					665					670		
Phe	Ala	Leu	Phe	Ala	Ile	Ala	Ala	Gly	Tyr	Ala	Ala	Trp	Leu	His	Phe
		675					680					685			
Ala	Pro	Arg	Gly	Ala	Gly	Glu	Gly	Arg	Leu	Ile	Arg	Ala	Leu	Thr	Thr
	690					695					700				
Ala	Pro	Val	Pro	Ile	Val	Ala	Gly	Phe	Met	Ala	Ala	Val	Phe	Val	Ala
705					710					715					720
Ser	Met	Val	Ala	Gly	Ile	Val	Arg	Gln	Tyr	Pro	Thr	Tyr	Ser	Asn	Gly
				725					730					735	
Trp	Ser	Asn	Val	Arg	Ala	Phe	Val	Gly	Gly	Cys	Gly	Leu	Ala	Asp	Asp
			740					745					750		
Val	Leu	Val	Glu	Pro	Asp	Thr	Asn	Ala	Gly	Phe	Met	Lys	Pro	Leu	Asp
		755					760					765			
Gly	Asp	Ser	Gly	Ser	Trp	Gly	Pro	Leu	Gly	Pro	Leu	Gly	Gly	Val	Asn
	770					775					780				
Pro	Val	Gly	Phe	Thr	Pro	Asn	Gly	Val	Pro	Glu	His	Thr	Val	Ala	Glu
785					790					795					800
Ala	Ile	Val	Met	Lys	Pro	Asn	Gln	Pro	Gly	Thr	Asp	Tyr	Asp	Trp	Asp
				805					810					815	
Ala	Pro	Thr	Lys	Leu	Thr	Ser	Pro	Gly	Ile	Asn	Gly	Ser	Thr	Val	Pro
			820					825					830		
Leu	Pro	Tyr	Gly	Leu	Asp	Pro	Ala	Arg	Val	Pro	Leu	Ala	Gly	Thr	Tyr
		835					840					845			
Thr	Thr	Gly	Ala	Gln	Gln	Gln	Ser	Thr	Leu	Val	Ser	Ala	Trp	Tyr	Leu
	850					855					860				
Leu	Pro	Lys	Pro	Asp	Asp	Gly	His	Pro	Leu	Val	Val	Val	Thr	Ala	Ala
865					870					875					880
Gly	Lys	Ile	Ala	Gly	Asn	Ser	Val	Leu	His	Gly	Tyr	Thr	Pro	Gly	Gln
			885					890					895		
Thr	Val	Val	Leu	Glu	Tyr	Ala	Met	Pro	Gly	Pro	Gly	Ala	Leu	Val	Pro
			900					905					910		
Ala	Gly	Arg	Met	Val	Pro	Asp	Asp	Leu	Tyr	Gly	Glu	Gln	Pro	Lys	Ala
		915				920						925			
Trp	Arg	Asn	Leu	Arg	Phe	Ala	Arg	Ala	Lys	Met	Pro	Ala	Asp	Ala	Val
	930					935					940				
Ala	Val	Arg	Val	Val	Ala	Glu	Asp	Leu	Ser	Leu	Thr	Pro	Glu	Asp	Trp
945					950					955					960
Ile	Ala	Val	Thr	Pro	Pro	Arg	Val	Pro	Asp	Leu	Arg	Ser	Leu	Gln	Glu
				965				970						975	
Tyr	Val	Gly	Ser	Thr	Gln	Pro	Val	Leu	Leu	Asp	Trp	Ala	Val	Gly	Leu
			980					985					990		
Ala	Phe	Pro	Cys	Gln	Gln	Pro	Met	Leu	His	Ala	Asn	Gly	Ile	Ala	Glu
		995					1000					1005			
Ile	Pro	Lys	Phe	Arg	Ile	Thr	Pro	Asp	Tyr	Ser	Ala	Lys	Lys	Leu	Asp
	1010					1015					1020				
Thr	Asp	Thr	Trp	Glu	Asp	Gly	Thr	Asn	Gly	Gly	Leu	Leu	Gly	Ile	Thr
1025					1030					1035					1040
Asp	Leu	Leu	Leu	Arg	Ala	His	Val	Met	Ala	Thr	Tyr	Leu	Ser	Arg	Asp
				1045					1050					1055	
Trp	Ala	Arg	Asp	Trp	Gly	Ser	Leu	Arg	Lys	Phe	Asp	Thr	Leu	Val	Asp
			1060					1065					1070		
Ala	Pro	Pro	Ala	Gln	Leu	Glu	Leu	Gly	Thr	Ala	Thr	Arg	Ser	Gly	Leu
			1075				1080						1085		

Trp Ser Pro Gly Lys Ile Arg Ile Gly Pro
 1090 1095

<210> 289

<211> 419

<212> PRT

<213> Mycobacterium tuberculosis

<400> 289

Val	Ile	Asp	Leu	Lys	Leu	Leu	Arg	Glu	Asn	Pro	Asp	Ala	Val	Arg	Arg
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Ser	Gln	Leu	Ser	Arg	Gly	Glu	Asp	Pro	Ala	Leu	Val	Asp	Ala	Leu	Leu
		20					25					30			
Thr	Ala	Asp	Ala	Ala	Arg	Arg	Ala	Val	Ile	Ser	Thr	Ala	Asp	Ser	Leu
		35					40					45			
Arg	Ala	Glu	Gln	Lys	Ala	Ala	Ser	Lys	Ser	Val	Gly	Gly	Ala	Ser	Pro
	50					55					60				
Glu	Glu	Arg	Pro	Pro	Leu	Leu	Arg	Arg	Ala	Lys	Glu	Leu	Ala	Glu	Gln
65					70				75					80	
Val	Lys	Ala	Ala	Glu	Ala	Asp	Glu	Val	Glu	Ala	Glu	Ala	Ala	Phe	Thr
				85					90					95	
Ala	Ala	His	Leu	Ala	Ile	Ser	Asn	Val	Ile	Val	Asp	Gly	Val	Pro	Ala
			100					105					110		
Gly	Gly	Glu	Asp	Asp	Tyr	Ala	Val	Leu	Asp	Val	Val	Gly	Glu	Pro	Ser
		115					120					125			
Tyr	Leu	Glu	Asn	Pro	Lys	Asp	His	Leu	Glu	Leu	Gly	Glu	Ser	Leu	Gly
	130					135					140				
Leu	Ile	Asp	Met	Gln	Arg	Gly	Ala	Lys	Val	Ser	Gly	Ser	Arg	Phe	Tyr
145					150					155					160
Phe	Leu	Thr	Gly	Arg	Gly	Ala	Leu	Leu	Gln	Leu	Gly	Leu	Leu	Gln	Leu
				165					170					175	
Ala	Leu	Lys	Leu	Ala	Val	Asp	Asn	Gly	Phe	Val	Pro	Thr	Ile	Pro	Pro
			180					185					190		
Val	Leu	Val	Arg	Pro	Glu	Val	Met	Val	Gly	Thr	Gly	Phe	Leu	Gly	Ala
		195					200					205			
His	Ala	Glu	Glu	Val	Tyr	Arg	Val	Glu	Gly	Asp	Gly	Leu	Tyr	Leu	Val
	210					215					220				
Gly	Thr	Ser	Glu	Val	Pro	Leu	Ala	Gly	Tyr	His	Ser	Gly	Glu	Ile	Leu
	225				230					235					240
Asp	Leu	Ser	Arg	Gly	Pro	Leu	Arg	Tyr	Ala	Gly	Trp	Ser	Ser	Cys	Phe
			245						250					255	
Arg	Arg	Glu	Ala	Gly	Ser	His	Gly	Lys	Asp	Thr	Arg	Gly	Ile	Ile	Arg
		260						265					270		
Val	His	Gln	Phe	Asp	Lys	Val	Glu	Gly	Phe	Val	Tyr	Cys	Thr	Pro	Ala
		275					280					285			
Asp	Ala	Glu	His	Glu	His	Glu	Arg	Leu	Leu	Gly	Trp	Gln	Arg	Gln	Met
	290					295					300				
Leu	Ala	Arg	Ile	Glu	Val	Pro	Tyr	Arg	Val	Ile	Asp	Val	Ala	Ala	Gly
	305				310					315					320
Asp	Leu	Gly	Ser	Ser	Ala	Ala	Arg	Lys	Phe	Asp	Cys	Glu	Ala	Trp	Ile
			325						330					335	
Pro	Thr	Gln	Gly	Ala	Tyr	Arg	Glu	Leu	Thr	Ser	Thr	Ser	Asn	Cys	Thr
		340						345					350		
Thr	Phe	Gln	Ala	Arg	Arg	Leu	Ala	Thr	Arg	Tyr	Arg	Asp	Ala	Ser	Gly
		355					360					365			
Lys	Pro	Gln	Ile	Ala	Ala	Thr	Leu	Asn	Gly	Thr	Leu	Ala	Thr	Thr	Arg
	370						375					380			

Trp Leu Val Ala Ile Leu Glu Asn His Gln Arg Pro Asp Gly Ser Val
 385 390 395 400
 Arg Val Pro Asp Ala Leu Val Pro Phe Val Gly Val Glu Val Leu Glu
 405 410 415
 Pro Val Ala

<210> 290
 <211> 480
 <212> PRT
 <213> Mycobacterium tuberculosis

<400> 290
 Val Pro Glu Ala Val Gln Glu Ala Asp Leu Leu Thr Ala Ala Ala Val
 1 5 10 15
 Ala Leu Asn Arg His Ala Ala Leu Leu Arg Glu Leu Gly Ser Val Phe
 20 25 30
 Ala Ala Ala Gly His Glu Leu Tyr Leu Val Gly Gly Ser Val Arg Asp
 35 40 45
 Ala Leu Leu Gly Arg Leu Ser Pro Asp Leu Asp Phe Thr Thr Asp Ala
 50 55 60
 Arg Pro Glu Arg Val Gln Glu Ile Val Arg Pro Trp Ala Asp Ala Val
 65 70 75 80
 Trp Asp Thr Gly Ile Glu Phe Gly Thr Val Gly Val Gly Lys Ser Asp
 85 90 95
 His Arg Met Glu Ile Thr Thr Phe Arg Ala Asp Ser Tyr Asp Arg Val
 100 105 110
 Ser Arg His Pro Glu Val Arg Phe Gly Asp Cys Leu Glu Gly Asp Leu
 115 120 125
 Val Arg Arg Asp Phe Thr Thr Asn Ala Met Ala Val Arg Val Thr Ala
 130 135 140
 Thr Gly Pro Gly Glu Phe Leu Asp Pro Leu Gly Gly Leu Ala Ala Leu
 145 150 155 160
 Arg Ala Lys Val Leu Asp Thr Pro Ala Ala Pro Ser Gly Ser Phe Gly
 165 170 175
 Asp Asp Pro Leu Arg Met Leu Arg Ala Ala Arg Phe Val Ser Gln Leu
 180 185 190
 Gly Phe Ala Val Ala Pro Arg Val Arg Ala Ala Ile Glu Glu Met Ala
 195 200 205
 Pro Gln Leu Ala Arg Ile Ser Ala Glu Arg Val Ala Ala Glu Leu Asp
 210 215 220
 Lys Leu Leu Val Gly Glu Asp Pro Ala Ala Gly Ile Asp Leu Met Val
 225 230 235 240
 Gln Ser Gly Met Gly Ala Val Val Leu Pro Glu Ile Gly Gly Met Arg
 245 250 255
 Met Ala Ile Asp Glu His His Gln His Lys Asp Val Tyr Gln His Ser
 260 265 270
 Leu Thr Val Leu Arg Gln Ala Ile Ala Leu Glu Asp Asp Gly Pro Asp
 275 280 285
 Leu Val Leu Arg Trp Ala Ala Leu Leu His Asp Ile Gly Lys Pro Ala
 290 295 300
 Thr Arg Arg His Glu Pro Asp Gly Gly Val Ser Phe His His His Glu
 305 310 315 320
 Val Val Gly Ala Lys Met Val Arg Lys Arg Met Arg Ala Leu Lys Tyr
 325 330 335
 Ser Lys Gln Met Ile Asp Asp Ile Ser Gln Leu Val Tyr Leu His Leu
 340 345 350

Arg Phe His Gly Tyr Gly Asp Gly Lys Trp Thr Asp Ser Ala Val Arg
 355 360 365
 Arg Tyr Val Thr Asp Ala Gly Ala Leu Leu Pro Arg Leu His Lys Leu
 370 375 380
 Val Arg Ala Asp Cys Thr Thr Arg Asn Lys Arg Arg Ala Ala Arg Leu
 385 390 395 400
 Gln Ala Ser Tyr Asp Arg Leu Glu Glu Arg Ile Ala Glu Leu Ala Ala
 405 410 415
 Gln Glu Asp Leu Asp Arg Val Arg Pro Asp Leu Asp Gly Asn Gln Ile
 420 425 430
 Met Ala Val Leu Asp Ile Pro Ala Gly Pro Gln Val Gly Glu Ala Trp
 435 440 445
 Arg Tyr Leu Lys Glu Leu Arg Leu Glu Arg Gly Pro Leu Ser Thr Glu
 450 455 460
 Glu Ala Thr Thr Glu Leu Leu Ser Trp Trp Lys Ser Arg Gly Asn Arg
 465 470 475 480

<210> 291

<211> 133

<212> PRT

<213> Mycobacterium tuberculosis

<400> 291

Met Ala Asp Arg Ile Glu Leu Arg Gly Leu Thr Val His Gly Arg His
 1 5 10 15
 Gly Val Tyr Asp His Glu Arg Val Ala Gly Gln Arg Phe Val Ile Asp
 20 25 30
 Val Thr Val Trp Ile Asp Leu Ala Glu Ala Ala Asn Ser Asp Asp Leu
 35 40 45
 Ala Asp Thr Tyr Asp Tyr Val Arg Leu Ala Ser Arg Ala Ala Glu Ile
 50 55 60
 Val Ala Gly Pro Pro Arg Lys Leu Ile Glu Thr Val Gly Ala Glu Ile
 65 70 75 80
 Ala Asp His Val Met Asp Asp Gln Arg Val His Ala Val Glu Val Ala
 85 90 95
 Val His Lys Pro Gln Ala Pro Ile Pro Gln Thr Phe Asp Asp Val Ala
 100 105 110
 Val Val Ile Arg Arg Ser Arg Arg Gly Gly Arg Gly Trp Val Val Pro
 115 120 125
 Ala Gly Gly Ala Val
 130

<210> 292

<211> 760

<212> PRT

<213> Mycobacterium tuberculosis

<400> 292

Met Asn Arg Lys Asn Val Thr Arg Thr Ile Thr Ala Ile Ala Val Val
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 Val Leu Leu Gly Trp Ser Phe Phe Tyr Phe Ser Asp Asp Thr Arg Gly
 20 25 30
 Tyr Lys Pro Val Asp Thr Ser Val Ala Ile Thr Gln Ile Asn Gly Asp
 35 40 45
 Asn Val Lys Ser Ala Gln Ile Asp Asp Arg Glu Gln Gln Leu Arg Leu
 50 55 60
 Ile Leu Lys Lys Gly Asn Asn Glu Thr Asp Gly Ser Glu Lys Val Ile

65				70					75				80		
Thr	Lys	Tyr	Pro	Thr	Gly	Tyr	Ala	Val	Asp	Leu	Phe	Asn	Ala	Leu	Ser
				85					90					95	
Ala	Lys	Asn	Ala	Lys	Val	Ser	Thr	Val	Val	Asn	Gln	Gly	Ser	Ile	Leu
			100					105					110		
Gly	Glu	Leu	Leu	Val	Tyr	Val	Leu	Pro	Leu	Leu	Leu	Leu	Val	Gly	Leu
		115					120					125			
Phe	Val	Met	Phe	Ser	Arg	Met	Gln	Gly	Gly	Ala	Arg	Met	Gly	Phe	Gly
		130				135					140				
Phe	Gly	Lys	Ser	Arg	Ala	Lys	Gln	Leu	Ser	Lys	Asp	Met	Pro	Lys	Thr
145					150					155					160
Thr	Phe	Ala	Asp	Val	Ala	Gly	Val	Asp	Glu	Ala	Val	Glu	Glu	Leu	Tyr
				165					170					175	
Glu	Ile	Lys	Asp	Phe	Leu	Gln	Asn	Pro	Ser	Arg	Tyr	Gln	Ala	Leu	Gly
			180					185					190		
Ala	Lys	Ile	Pro	Lys	Gly	Val	Leu	Leu	Tyr	Gly	Pro	Pro	Gly	Thr	Gly
		195					200					205			
Lys	Thr	Leu	Leu	Ala	Arg	Ala	Val	Ala	Gly	Glu	Ala	Gly	Val	Pro	Phe
		210				215					220				
Phe	Thr	Ile	Ser	Gly	Ser	Asp	Phe	Val	Glu	Met	Phe	Val	Gly	Val	Gly
225					230					235					240
Ala	Ser	Arg	Val	Arg	Asp	Leu	Phe	Glu	Gln	Ala	Lys	Gln	Asn	Ser	Pro
			245					250						255	
Cys	Ile	Ile	Phe	Val	Asp	Glu	Ile	Asp	Ala	Val	Gly	Arg	Gln	Arg	Gly
			260					265					270		
Ala	Gly	Leu	Gly	Gly	Gly	His	Asp	Glu	Arg	Glu	Gln	Thr	Leu	Asn	Gln
		275					280					285			
Leu	Leu	Val	Glu	Met	Asp	Gly	Phe	Gly	Asp	Arg	Ala	Gly	Val	Ile	Leu
		290				295					300				
Ile	Ala	Ala	Thr	Asn	Arg	Pro	Asp	Ile	Leu	Asp	Pro	Ala	Leu	Leu	Arg
305					310					315					320
Pro	Gly	Arg	Phe	Asp	Arg	Gln	Ile	Pro	Val	Ser	Asn	Pro	Asp	Leu	Ala
			325						330					335	
Gly	Arg	Arg	Ala	Val	Leu	Arg	Val	His	Ser	Lys	Gly	Lys	Pro	Met	Ala
			340					345					350		
Ala	Asp	Ala	Asp	Leu	Asp	Gly	Leu	Ala	Lys	Arg	Thr	Val	Gly	Met	Thr
		355				360						365			
Gly	Ala	Asp	Leu	Ala	Asn	Val	Ile	Asn	Glu	Ala	Ala	Leu	Leu	Thr	Ala
		370				375					380				
Arg	Glu	Asn	Gly	Thr	Val	Ile	Thr	Gly	Pro	Ala	Leu	Glu	Glu	Ala	Val
385					390					395					400
Asp	Arg	Val	Ile	Gly	Gly	Pro	Arg	Arg	Lys	Gly	Arg	Ile	Ile	Ser	Glu
			405					410						415	
Gln	Glu	Lys	Lys	Ile	Thr	Ala	Tyr	His	Glu	Gly	Gly	His	Thr	Leu	Ala
			420					425					430		
Ala	Trp	Ala	Met	Pro	Asp	Ile	Glu	Pro	Ile	Tyr	Lys	Val	Thr	Ile	Leu
		435					440					445			
Ala	Arg	Gly	Arg	Thr	Gly	Gly	His	Ala	Val	Ala	Val	Pro	Glu	Glu	Asp
		450				455					460				
Lys	Gly	Leu	Arg	Thr	Arg	Ser	Glu	Met	Ile	Ala	Gln	Leu	Val	Phe	Ala
465					470					475					480
Met	Gly	Gly	Arg	Ala	Ala	Glu	Glu	Leu	Val	Phe	Arg	Glu	Pro	Thr	Thr
			485					490						495	
Gly	Ala	Val	Ser	Asp	Ile	Glu	Gln	Ala	Thr	Lys	Ile	Ala	Arg	Ser	Met
			500					505					510		
Val	Thr	Glu	Phe	Gly	Met	Ser	Ser	Lys	Leu	Gly	Ala	Val	Lys	Tyr	Gly
		515					520					525			

